



Exploring the Cultural Ecosystem Services and Benefits of the Marine and Coastal Environment: A Case Study from South West England

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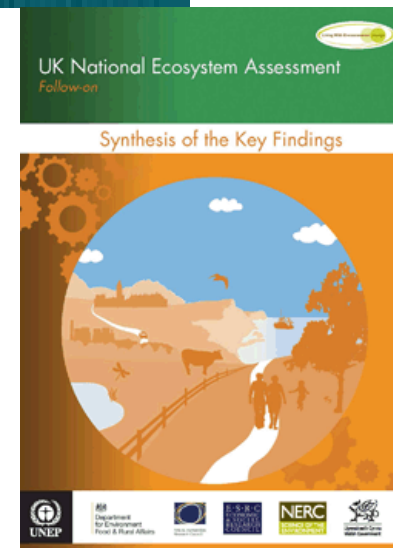
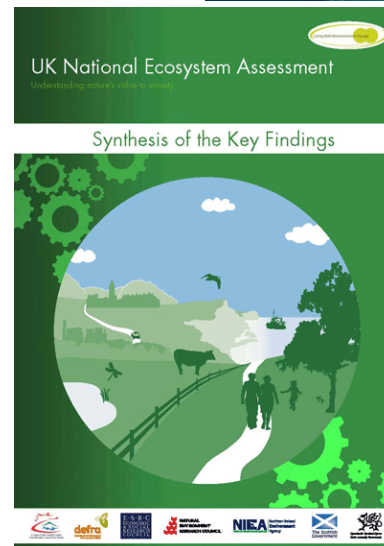
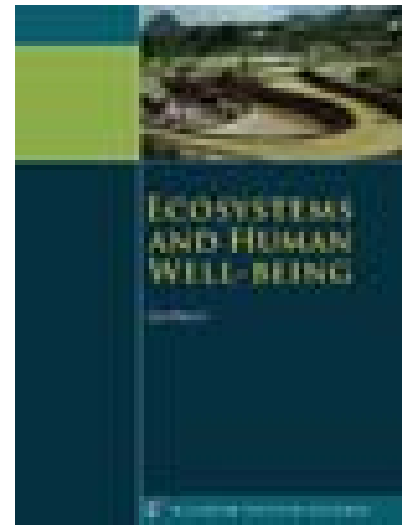
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Cultural Implications for Ecosystem Services 1
ACES 2014, Washington , DC, 9th December 2014



Research Context

‘In the research to date, there is less attention to important cultural ecosystem services. This is because there is no commonly accepted framework for eliciting intangible values, characterising their changes and including them alongside other services in decision-making’ (Chan et al.,2012)

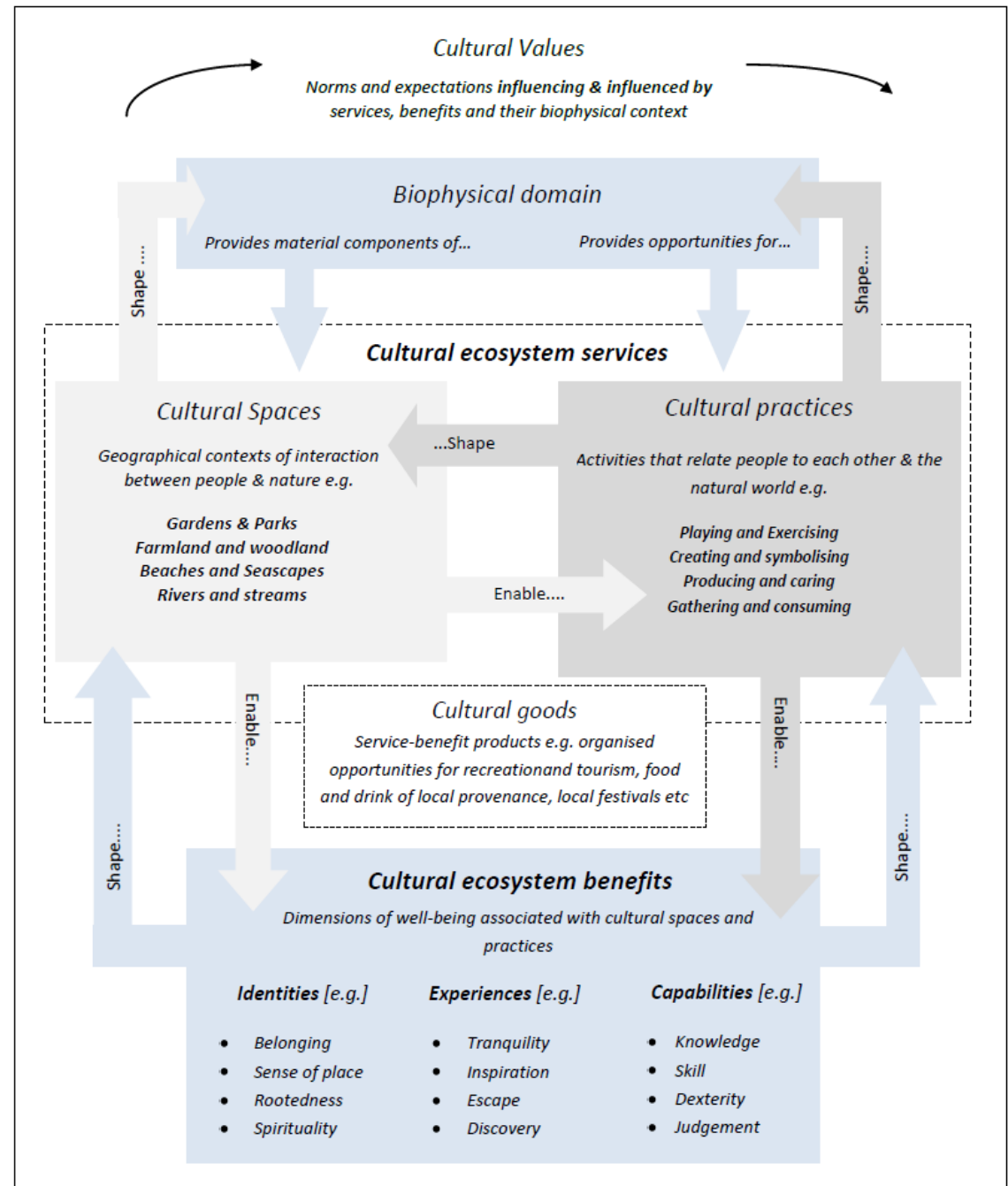


MA (2005) Definition

Cultural ecosystem services are
“the non material benefits
people obtain from ecosystems”

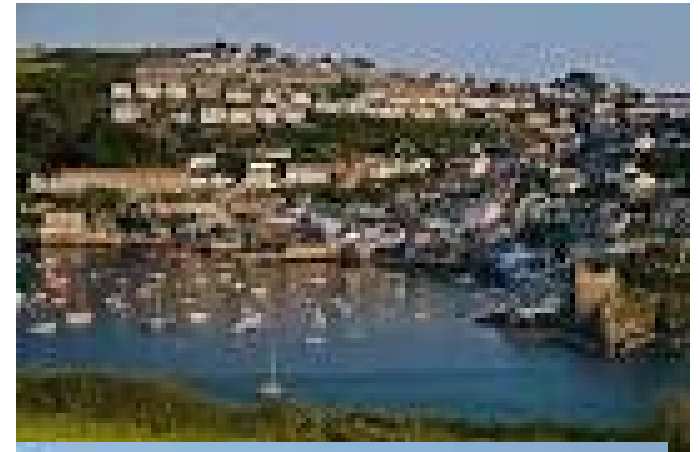
Re- definition (Fish & Church, 2014)

Cultural ecosystem services are
“the contributions ecosystem
make to human well-being in
terms of the **identities** they
help frame, the **experiences**
they help enable and the
capabilities they help equip”



Case Study Area

Plymouth Sound to Fowey



Key Research Objectives

- *To reveal the cultural attributes and the range of practices undertaken in and associated with the Plymouth Sound to Fowey seascape*
- *To understand the range of cultural and well-being benefits arising from this setting*
- *To locate spatially the ecological resources in the case study area which provide benefits and those which are particularly significant or problematic to benefit flows*

Approaches to Revealing Cultural Ecosystem Services in Plymouth Sound to Fowey – Questionnaire & Map-based Survey

Exploring the Cultural, Health and Well-being Benefits of a Marine Environment: A Case Study of Plymouth Sound to Fowey

Background
The University of Exeter is conducting a survey in the Plymouth Sound to Fowey area to understand how people use and benefit from the local marine and coastal environment. We are gathering information on the different ways people interact with local beaches, shores, the sea and the environment under the sea and how this relates to health and well being.

The research is a collaboration between the Universities of Exeter and Plymouth, Cornwall Council, Plymouth Marine Laboratory and the Marine Biological Association. It is funded through the European Regional Development Fund. The results of this work are part of a bigger project exploring how to better manage marine environments (see www.valmer.eu for more details).

We would be delighted if you would be kind enough to complete this short survey. Every survey response really counts and if you are completing a paper copy, there is a freepost envelope for you to return it to us. **All responses will be treated as completely confidential!**

We'd be very grateful for a response by 7th March 2014. If you would prefer to complete this on-line, please go to <http://www.dash.ac.uk/marine-wellbeing>

Community Events
In March, we will be holding 3 informal events in the area to present some of the findings of our research and to learn more about people's views about this environment. If you would like to join us for an event, please indicate which of the dates you would like to make (you may tick more than one to indicate you could attend on different days) and complete your contact details below. A buffet lunch/tea will be provided and the events should be a lot of fun. If you would like any further details about this research, please contact Cheryl Willis (c.a.willis@exeter.ac.uk)

I would like to take part in a discussion event ☐

Name	
Address	
Postcode	
Telephone	
E-mail	

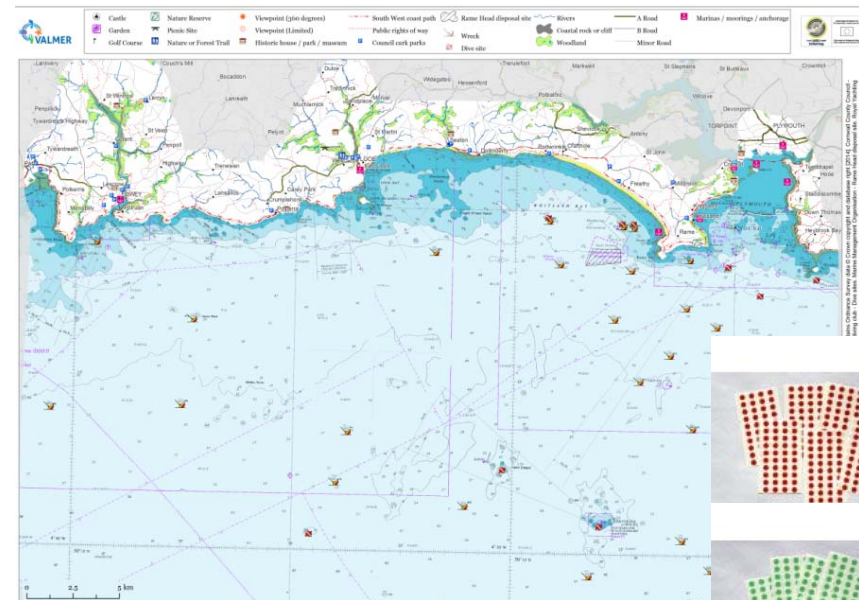
*Your details, if given are covered by the Data Protection Act 1998. Your information will not be used for any other purpose and will not be passed onto a third party. This questionnaire will be retained for 1 year after which it will be destroyed in a secure manner.

Date	Time	Location	Tick
24.03.14	6.30-9pm	The Safe Harbour Hotel, Fowey	
25.03.14	12-2.30pm	Seaton Beach Cafe	
25.03.14	6.30-9pm	Finnygook Inn, Crafthole	

Q1. What do you spontaneously associate with the 'sea' and the 'coast'? (Please write any words or phrases which come to you without thinking too much)

Q2. Generally, how often do you spend time on, in or by the sea in the Plymouth Sound to Fowey area?

	On or in the sea	Near the sea and/or at the beach
More than once a day		
Once a day		
Several times a week		
Once a week		
Once or twice a month		
A few times a year		
Almost never		



Spontaneous Associations with the 'sea' and the 'coast'

- adventure along away **beach** beaches beautiful beauty being blue
boating **boats** calm childhood children clean cliff cliffs coast coastal cold creatures
danger days **diving** dogs driftwood energy enjoyment environment excitement **family**
feeling fish **fishing** food **freedom** **fresh** friends from getting **good**
happiness happy health history holiday **holidays** home invigorating kayaking landscape laughter
leisure life love marine memories nature open path **peace** peaceful
pleasure pollution pools power **relaxation** relaxing respect rock
rockpooling **rocks** rowing **sailing** salt **sand** scenery seagulls seaweed smell
soothing sound sounds **space** stunning summer **sunshine** surf surfing
swimming time **views** **walking** **walks** water
waves wild **wildlife** wind work

Key Findings - Attributes

- The environment spaces of Plymouth Sound to Fowey are associated with a range of culturally valued attributes and activities
- PCA revealed three distinct attribute groups

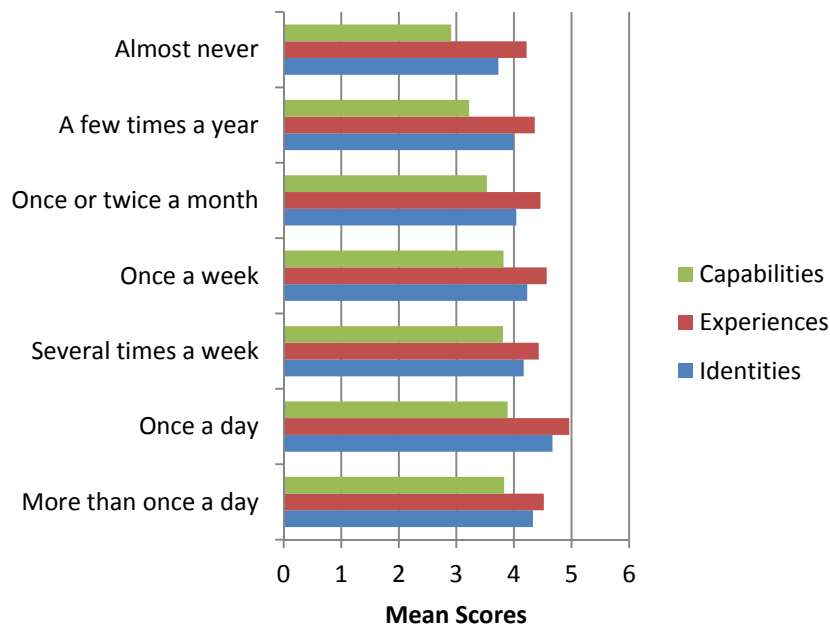
Attribute Group	Mean (sd)	Cronbach Alpha
Relaxing Space	4.47 (0.64)	0.78
Natural Value	4.67 (0.59)	0.88
Cultural Associations	3.64 (0.81)	0.52

Group	Activities	% Respondents engaged in these activities
Playing & exercising (Coast activities)	<ul style="list-style-type: none"> • Walking • Walking a dog • Running/Jogging • Eating/drinking • Reading • Beach games • Beach play • Appreciating scenery 	88
Playing & exercising (Sea-based activities)	<ul style="list-style-type: none"> • Swimming/bathing • Coasteering • Surface water sports • Underwater sports • Sailing • Pleasure boat trips 	67
Creating & symbolising	<ul style="list-style-type: none"> • Meditation/yoga • Spiritual/faith activities • Creative activities 	28
Managing & caring	<ul style="list-style-type: none"> • Observing wildlife • Conservation • Monitoring & collecting data • Informing/educating people 	47
Gathering & consuming	<ul style="list-style-type: none"> • Fishing • Collecting things 	50

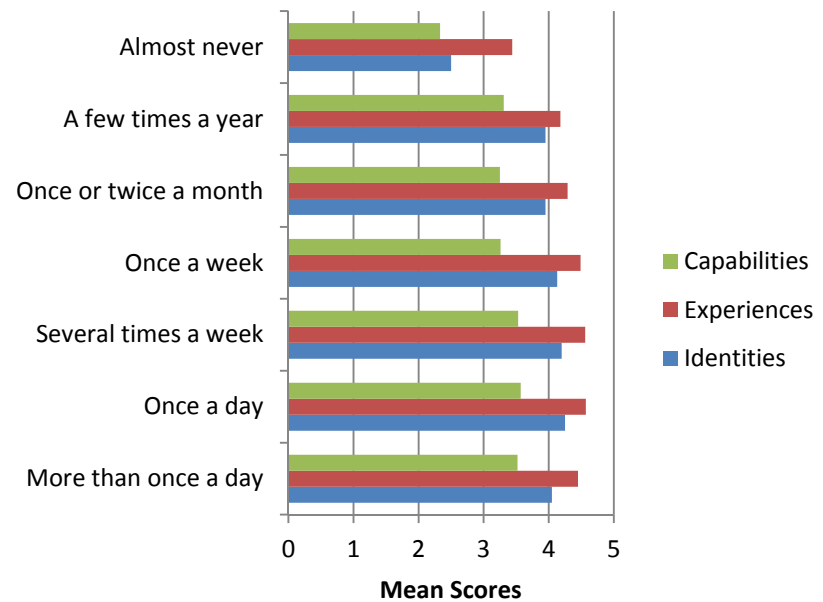
Benefits

Well-being benefit	Items included in questionnaire	Cronbach Alpha Score	Scale Mean *standard deviation
Identities	<ul style="list-style-type: none"> • Spend time with friends and family • Helps me feel I belong • Makes me feel closer to nature • Gives me time to be alone 	0.66	4.09 (0.61)*
Experiences	<ul style="list-style-type: none"> • Helps me feel relaxed and calm • Makes me feel spiritual or make a connection above and beyond myself • Is generally meaningful & worthwhile • Helps me clear my head and think • Helps me feel refreshed and revitalised • Reversed items for boring, uninspiring, nervous, waste of time 	0.80	4.43 (0.45)
Capabilities	<ul style="list-style-type: none"> • Helps me be creative • Helps me challenge myself • Helps me to develop skills 	0.69	3.41 (0.76)

Benefits increase with frequency of contact with the coast/sea



Interactions in/on the sea



Interactions near the sea /at the beach

Qualitative Expressions of Benefits

“It greatly helps my well-being and self-esteem. It makes you realise what a beautiful world we have”

“I have a strong bond with water, it makes me feel happy and part of the natural world”

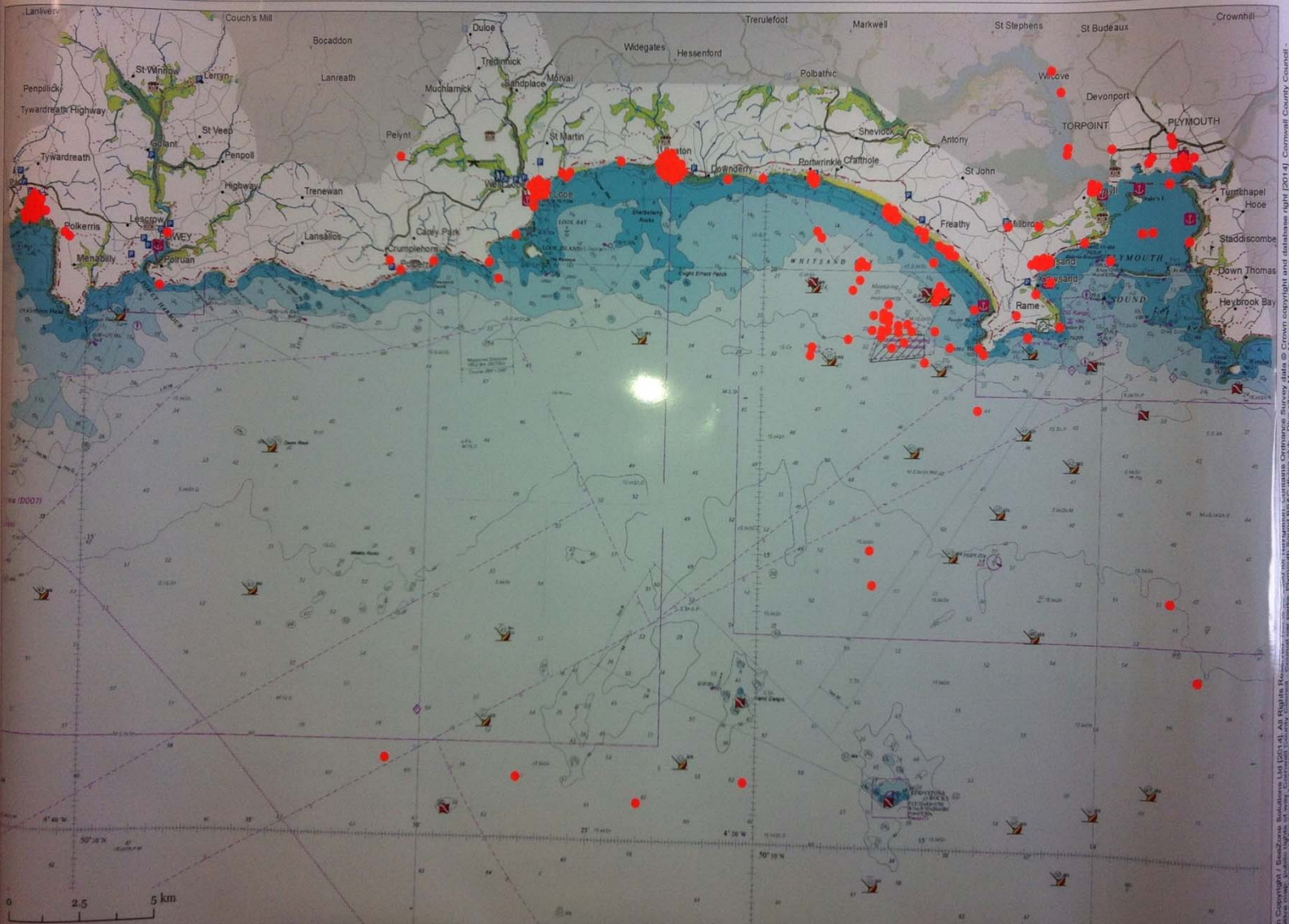
“I live, breathe, work and love the sea”

“It contributes to my feel-good factor. It’s amazing how this can help me to keep healthy”

“There is nothing as good for the soul as the sea”



- | | | | | | | | |
|-------------|------------------------|--------------------------------|-----------------------|-------------------------|-----------------------|------------|--------------------------------|
| Castle | Nature Reserve | Viewpoint (360 degrees) | South West coast path | Rame Head disposal site | Rivers | A Road | Marinas / moorings / anchorage |
| Garden | Nature or Forest Trail | Viewpoint (Limited) | Public rights of way | Wreck | Coastal rock or cliff | B Road | |
| Golf Course | | Historic house / park / museum | Council car parks | Dive site | Woodland | Minor Road | |



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Implications for Management

- Green dots spatially locate places which promote well-being benefits
 - Management priority for ensuring opportunities for people to access and enjoy these areas
- Red dots locate concerns about the degraded environment which impacts benefits
 - Litter, dumping, poor water quality, development, sea defences

Conclusions

- People derive a prodigious range of well-being benefits from interacting with the sea/coast in this area
- These benefits appear to increase with frequency of contact with the sea/coast
- Benefits are amenable to systematic scrutiny using the framework to guide investigations
- Environmental management can benefit from these understandings by safeguarding against changes which could impact well-being benefits and by ensuring opportunities for people to interact in the area

A scenic photograph of a beach and ocean. In the foreground, there is a grassy cliff with green grass and some yellow wildflowers. The middle ground shows a wide, sandy beach with gentle waves washing onto the shore. The ocean is a deep blue, and the sky is a pale, hazy blue. The text "Thank You" is centered over the image in a large, black, sans-serif font.

Thank You