



South West Partnership for Environment and Economic Prosperity

Prof Ian Bateman
SWEEP Director



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Laboratory

NERC
SCIENCE OF THE
ENVIRONMENT

THE SWEEP VISION

A scenic coastal landscape featuring rolling green hills, a winding river, and a blue sea under a cloudy sky. The image serves as the background for the entire slide.

*Placing natural capital at the heart
of South West business and policy
decision-making*



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THE NERC 'RISE' OBJECTIVE

Regional Impact from the Science of the Environment

Planned regeneration of coastal and marine capital in the heart of South West business and policy environment to enhance resilience and regeneration



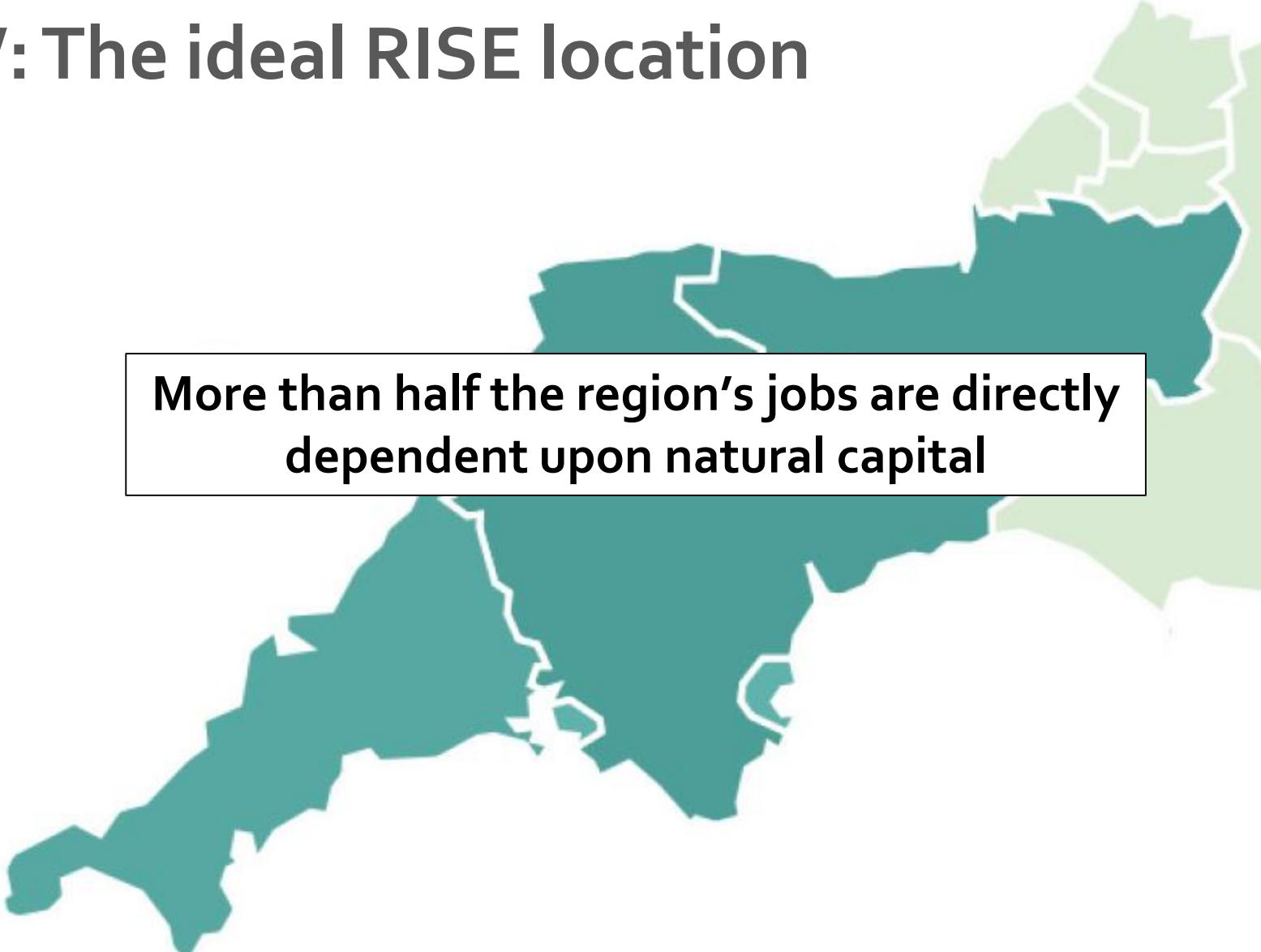
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SW: The ideal RISE location



More than half the region's jobs are directly dependent upon natural capital

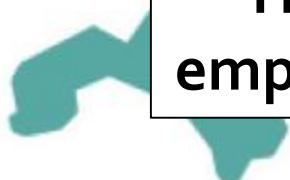
SW: The ideal RISE location



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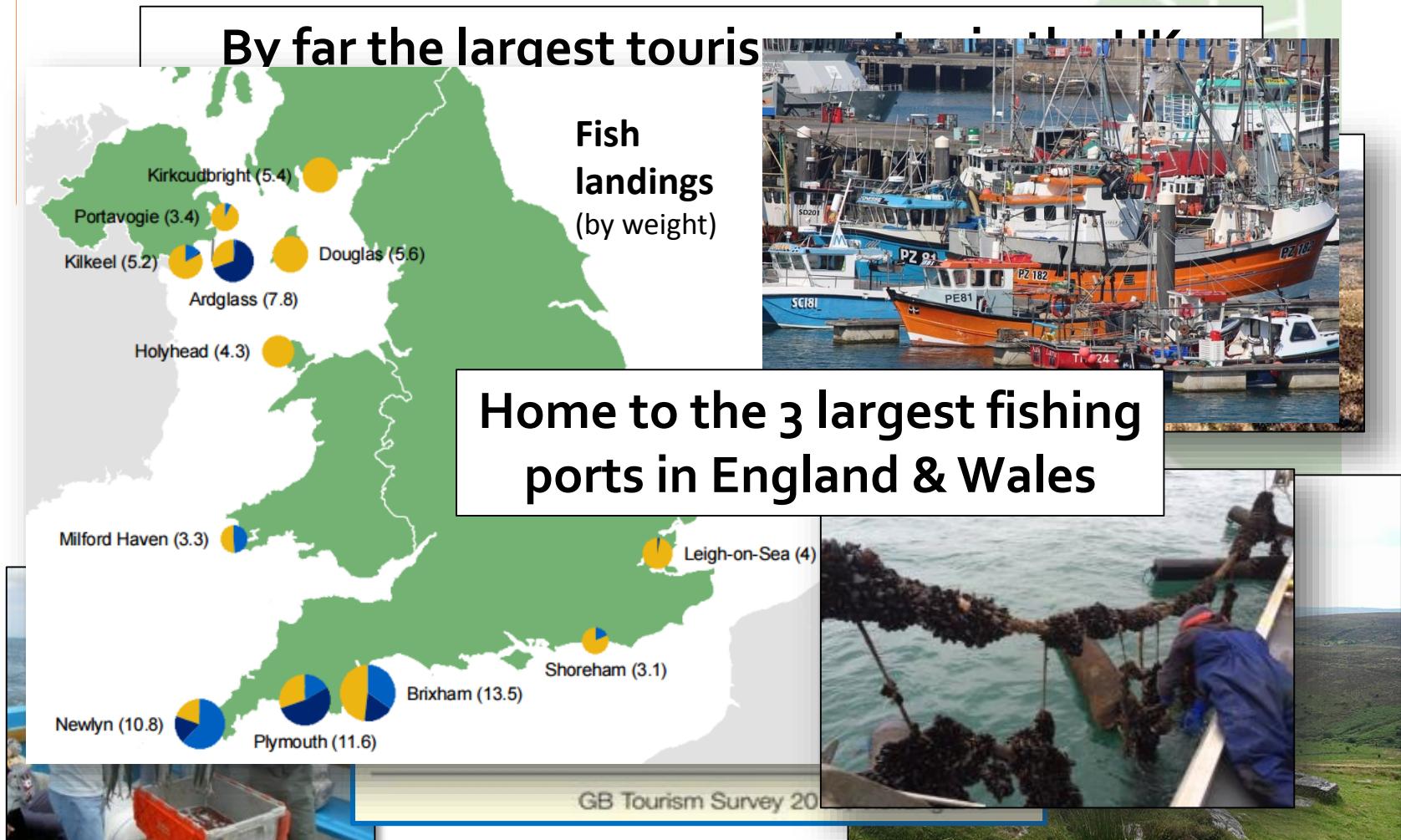
Highest dependency on farming for employment of any region in the country



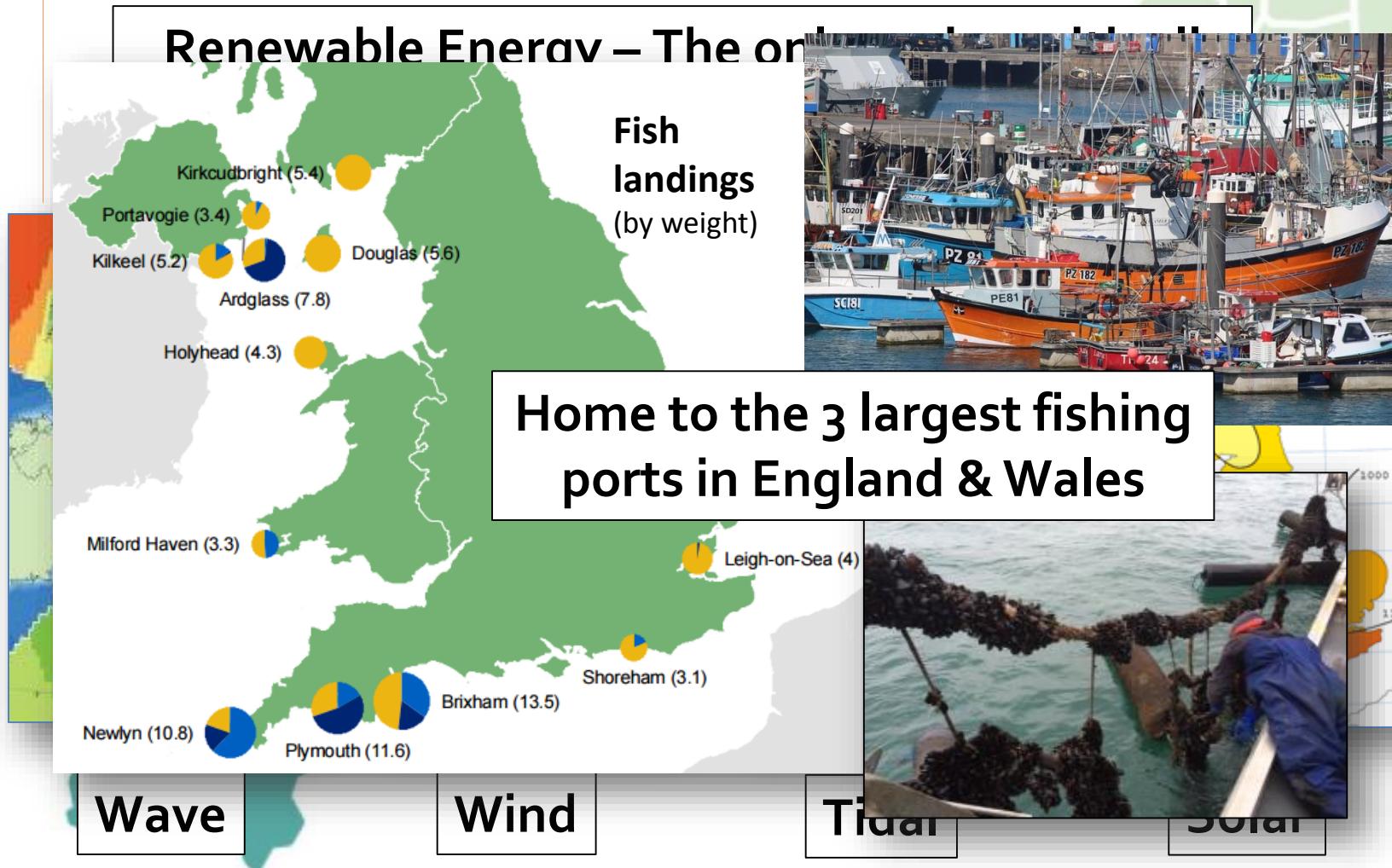
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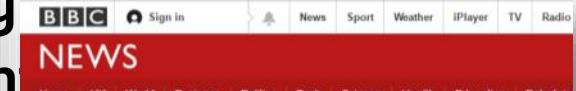
Pressures & Vulnerabilities

Demographic

High vulnerability
to natural hazards



Region with all
in



£1.2billion loss

wave

wind



Iidal



Economic dependence on
high quality environment

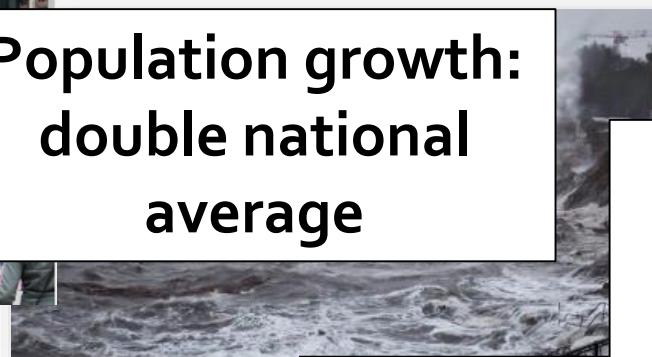


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SW: The ideal RISE location



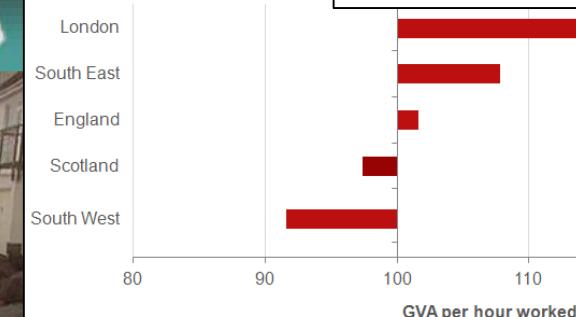
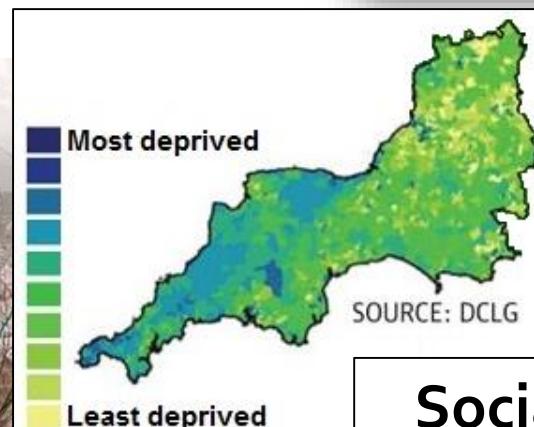
Population growth:
double national
average



Pressures &
Vulnerabilities

BBC News

Low tech: productivity
(GVA) 20% below
national average



Express & Echo

Heart of South West LEP confronts productivity challenge

By Exeter Express and Echo | Posted: September 25, 2015



Chris Garcia, chief executive of the Heart of the South West LEP
Business leaders from across Devon and Somerset gathered at Exeter Racecourse to discuss the challenge of increasing the region's productivity.



Social deprivation: Only
English region receiving
EU Higher Tier funding

SW: The ideal RISE location

Pressures & Vulnerabilities



Population growth:

The South West region:

- High natural capital dependency
- High vulnerability to natural hazards
- High rates of economic deprivation
- Needs to raise productivity



The Key:

Innovative partnerships between research, business and policy to transform use of the region's natural capital



English region receiving
EU Higher Tier funding

Chris Garcia, chief executive of the Heart of the South West LEP
Business leaders from across Devon and Somerset gathered at Exeter Racecourse to discuss the challenge of increasing the region's productivity.

SW: The ideal RISE location & the ideal time

Natural capital led growth strategies



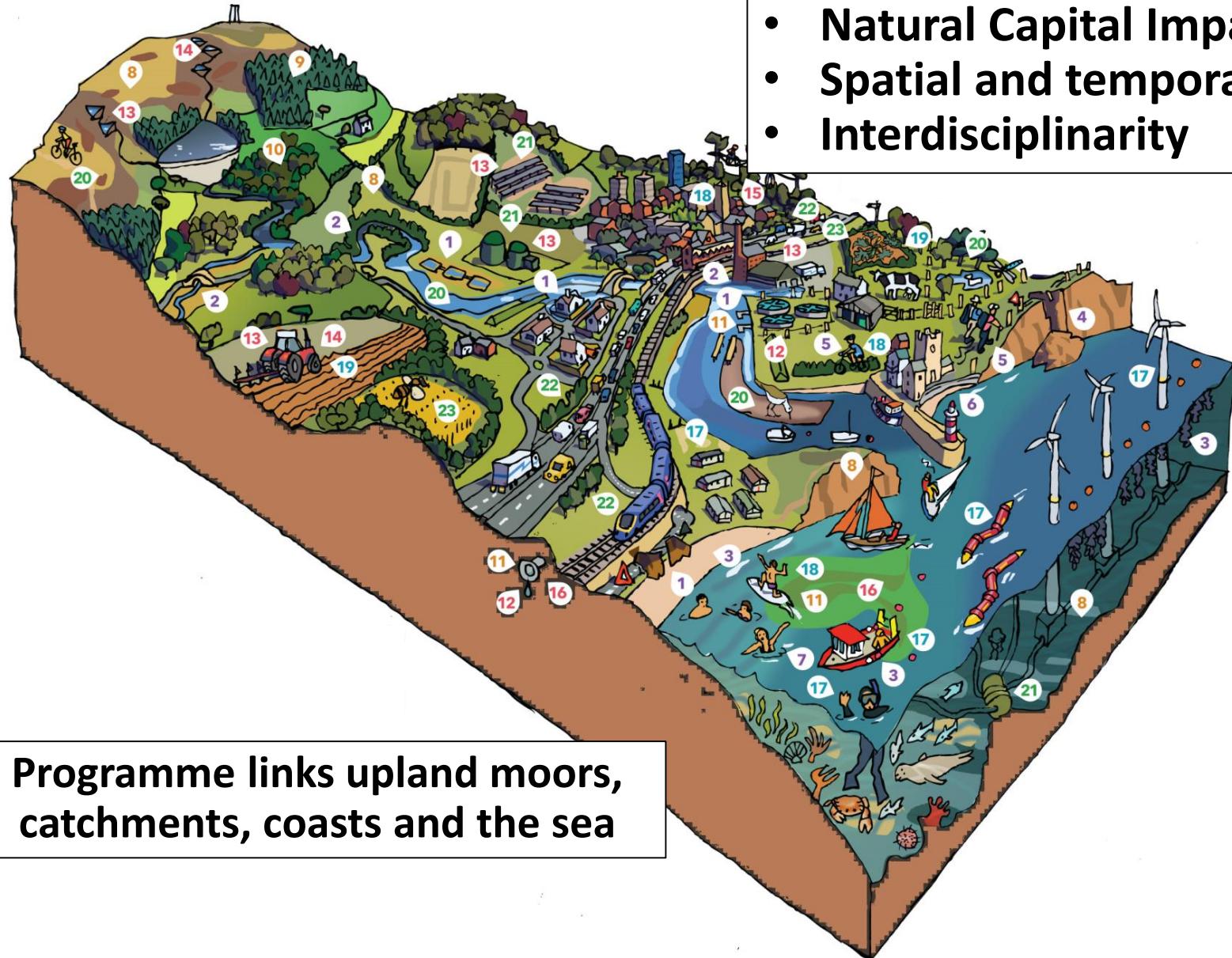
Brexit uncertainties / Government 25 Year Environment Plan

- Manchester (urban)
- Cumbria (catchment scale)
- North Devon (Landscape scale)
- North Devon Marine (Marine 1)
- North Norfolk Marine (Marine 2)



The only integrated
terrestrial-marine system Pioneer

SWEEP PROGRAMME

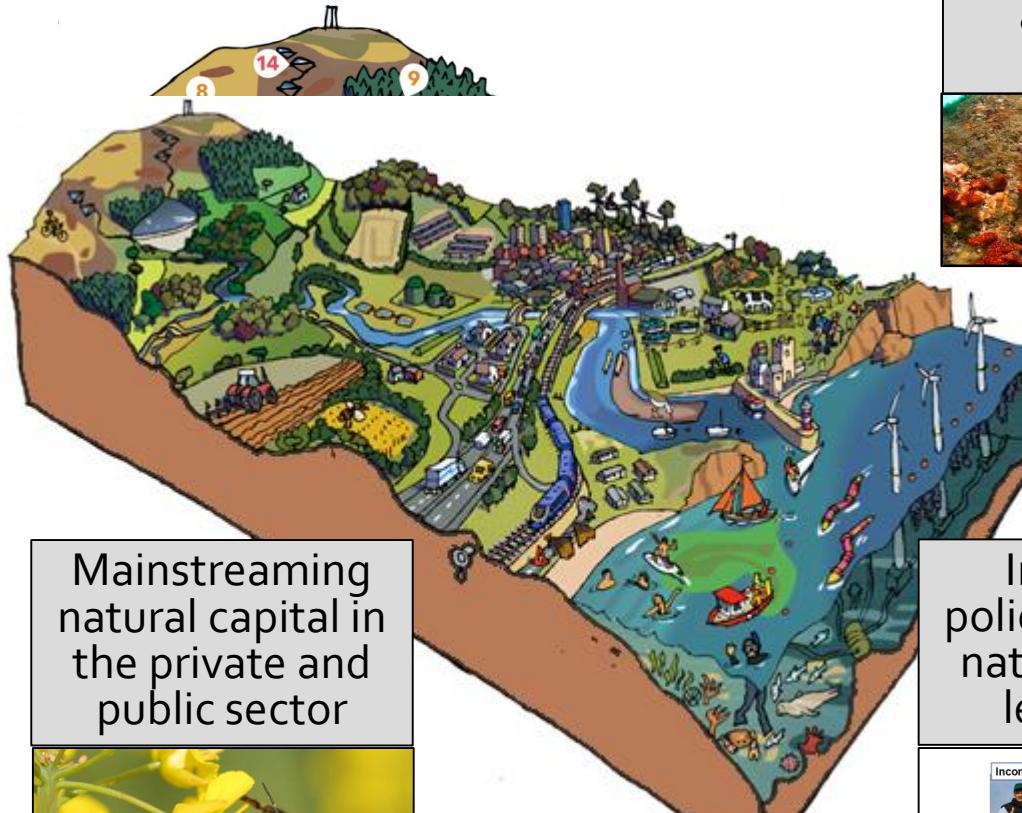


Integration:

- Natural Capital Impacts
- Spatial and temporal
- Interdisciplinarity

Programme links upland moors,
catchments, coasts and the sea

SWEEP PROGRAMME



Restoring natural capital for economic and social benefit



Safeguarding natural capital to increase resilience



Integrated policymaking for natural capital-led growth



Boosting the business sector: new markets for natural capital



THE SWEEP TEAM



Martin Attrill
Flooding Lead



Juliet Osborne
Food Sector Lead



Mel Austen
Marine Lead



Will Gaze
Health Lead



Gerd Masselink
Coastal Protection
Lead



Caroline Hattam
Impact Fellow Lead



Michael Winter
Agriculture &
Pioneer Lead



Brett Day
Natural Capital
Markets Lead



Ian Bateman
SWEEP Director



Charles Tyler
Water Co-Lead



Samantha Starkey
Comms Manager



Dawn Scott
Programme Manager



Kevin Gaston
Biodiversity &
SME Lead



Zoran Kapelan
Engineering Lead

SWEEP SKILLS

Natural Science: Atmospheric, Hydrological, Marine, Soil, Ecological, Biogeochemical, Engineering



Social Science: Economics, Sociology, Politics, Human Geography



SWEEP PARTNERS



SOUTH WEST WATER



working to accelerate
offshore consenting



**heart of the
south west**
local enterprise partnership



**CORNWALL &
ISLES OF SCILLY**
LOCAL ENTERPRISE PARTNERSHIP



Department
for Environment
Food & Rural Affairs

Pell Frischmann
Flood Risk Engineers



AstraZeneca



Forestry Commission



More than 40 partners bringing over
£11M in additional support



The Business Voice for a Better Future



Marine
Management
Organisation



Cornwall
Sustainable
Tourism
Project



Riviera Produce
Cornwall's grower of choice



**SURFERS
AGAINST
SEWAGE**

Public Health Devon



**NATURAL
ENGLAND**

one and all
men hag all

**CORNWALL
COUNCIL**



NORTH WYKE
ROTHAMSTED
RESEARCH



Cornwall
Area of Outstanding
Natural Beauty



Cefas



**Offshore
shellfish**
Ltd



**National
Trust**



CLINTON DEVON ESTATES



**Public
Health
Dorset**



Westcountry
Rivers Trust



**Environment
Agency**



**Public Health
England**



SWEET & DELIVER



heart of the
south west
local enterprise partnership



CORNWALL &
ISLES OF SCILLY
LOCAL ENTERPRISE PARTNERSHIP



Department
for Environment
Food & Rural Affairs

Pell Frischmann
Flood Risk Engineers



Forestry Commission



Department
for Environment
Food & Rural Affairs



Cornwall Health and
Wellbeing Board



North Devon Biosphere



South West Water



North Wyke



Cornwall Council



Devon Environment Agency



Public Health England

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Marine
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SURFERS
AGAINST
SEWAGE



National
Trust



CORNWALL &
ISLES OF SCILLY
LOCAL NATURE PARTNERSHIP



NATURAL
ENGLAND



RSPB



Environment
Agency



The
wildlife
trusts



CO-DESIGN & DELIVERY

- Impact Fellows
- Impact Associates
- Impact Cases
- Impact Residencies
- Engagement events
- SWEEP Cinema
- Virtual Impact Exchange



INITIAL FUNDING PROGRAMME

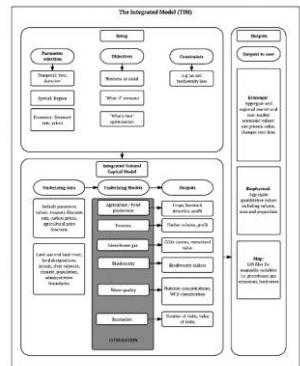
12 SWEEP Impact Cases funded since February 2017
Working with over 45 partners



Drones & leak detection



Marine planning



Integrated modelling



Wave modelling



Farming & natural capital



Payments for ecosystem services



Managing green space



Flood modelling



National Parks



Planning & marine renewables



Water quality modelling





IMPACT CASES TO DATE

| Abbreviated title | Project Lead | Main partners |
|-----------------------------------|-----------------------------|---|
| Wave forecasting | Masselink (PU) | EA, Met Office, RNLI, National Trust, Network Rail, Natural England, Magic Seaweed |
| 25YEP N Devon Marine Pioneer | Attrill & Austen (PU & PML) | Defra, N Devon Biosphere, Marine Management Organisation, World Wildlife Fund, NE, Devon & Severn IFCA, Devon LNP |
| Leak detection | Brazier (UoE) | South West Water |
| Dartmoor & Exmoor natural capital | Day & Tyler (UoE) | Exmoor National Park, Dartmoor National Park |
| 25YEP Pioneer & N Devon Biosphere | Binner (UoE) | Natural England, N Devon Biosphere, Forestry Commission, Defra, EA, JNCC, Ordnance Survey, RSPB, Carbon Fund, ESI Consulting, Moor Trees |
| Sustainable drainage | Kapelan (UoE) | Pell Frischmann |
| Managing Green Space | Osborne (UoE) | Cornwall Council, Riveria Produce, Kier, Natural England, NFU, Cornwall AONB, Agriculture and Horticulture Development Board |
| Whole catchment water management | Brazier (UoE) | SWW, WRT, Devon Wildlife Trust, Cornwall Wildlife Trust, Cefas, Offshore Fisheries, EA, AstraZeneca, Surfers Against Sewage, Aquatic Water Services, Defra, NT, NFU, Met Office, CoaST, Public Health England |
| SW Coastal Corridor | Tyler & Gaston (UoE) | National Trust, RSPB |
| Cornwall Env Growth Strategy | Gaston (UoE) | Cornwall & Isles of Scilly LNP, Cornwall Council, Cornwall AONB, NJW Ltd |
| Marine Renewables | Hooper (PML) | Seatricity, Offshore Renewables Joint Industry Partnership (ORJIP), RegenSW, WaveHub, Cornwall Council, Devon County Council |
| SW Marine Planning | Austen (PML) | Marine Management Organisation |

sweep STUDENTSHIPS

13 SWEEP studentships available
Each 50% funded with remainder from partners

Allocation (follows College funding inputs):

- Plymouth University: 2
- U. Exeter - Life & Env Science: 3 (1 @ Clinton Devon Estates; 2 available)
- U. Exeter – Business School: 3 (1 @ SWW; 1 @ JNCC; 1 available)
- U. Exeter - Engineering, Maths & Physical Sciences: 3 (currently unallocated)
- U. Exeter - Medical School ECEHH: 2 (1 with Will Gaze & Ben Wheeler, in discussion with Environment Agency, plus 1 available)



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sweep LONG TERM GOALS

In the SW:

- Transformation of the region
- Economic gains for business
- Improved public sector decision-making
- Enhanced environmental sustainability

Scaling up to national level:

- Shaping best practice for post Brexit decision making
- 25 Year Environment Plan

sweep CONTACT DETAILS

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Twitter  : [@SW_EEP](https://twitter.com/@SW_EEP)

Facebook: [www.facebook.com/SWEEP Research](https://www.facebook.com/SWEEPResearch)