

# Strengthening longer term sustainable development decisions for the future of the South West's coastline

The SWEEP team and partners developed a new, accessible, scientifically robust method for demarcating Coastal Change Management Areas, which significantly improve on previous guidance. Trials in the Taw Torridge estuary and Sidmouth areas met well with planners, and led to recommendations that the approach be adopted into Local Plans and be a 'material consideration' for coastal planning and engineering decisions going forward.

## SWEEP Impact Summary



Erosion at Start Bay (A379) March 2018

New scientifically robust method for demarcating CCMA's applied to

**115km** of Devon coastline in 2 case study areas



Natural England created

**1** new post with a coastal and CCMA remit



Strengthened 'material considerations' for coastal planning decisions in light

of **28%** of English and Welsh coastline experiencing erosion rates >10cm/year



### Ways of Working



### Why it mattered?

The South West has 1,014km of beautiful, environmentally diverse coastline, yet it is vulnerable and faces increasing pressure from human activity and erosion.

At some locations the coastline retreats by a metre every decade due to erosion, landslips, flooding and shifting sediments. Local Planning Authorities (LPAs) have the difficult task of deciding where to site future



*CCMA's have the potential to benefit the natural environment by:*

- *avoiding potential tensions between local communities and the needs of the natural environment in the face of predicted change;*
- *securing benefits for biodiversity, landscapes and access to the natural environment by demonstrating positive management in areas subject to change."*

Source: Natural England Manager

developments along these changing coastal and estuarine margins. To address these issues the UK's National Planning Policy Framework requires LPAs to identify where shorelines are likely to change significantly over the next 100 years. These designated Coastal Change Management Areas (CCMA's) can then be used to inform planning and management.

LPAs have often lacked the confidence, in-house expertise, or consistent methodology to establish such designations. As such, very few CCMA's currently exist, and coastal development continues in active coastal zones with little regard for future shoreline shifts.

### What we did

Scientists at the University of Plymouth's Coastal Processes Research Group, Prof. Gerd Masselink, Dr Tim Poate, and Dr Kit Stokes, as well as SWEEP PhD student Josie Kirby, worked closely with project partners Natural England, the Environment Agency, the Marine Management Organisation, Heritage England and the District Councils of North Devon, Torridge and East Devon.

An initial strategic review of existing CCMA's (and similar schemes internationally) gathered feedback from LPAs on the limitations of current criteria and approaches. Key issues identified were a lack of consideration of coastlines where 'hold the line' is the preferred management policy, the exclusion of the latest climate change projections, and insufficient spatial resolution in previous mapping. The team then set about developing an improved, scientifically robust method that planners could adopt, the public can understand, and which incorporates the latest climate science.

Using case study sites in Sidmouth, East Devon (a coastal wave-dominated environment prone to erosion) and the Taw Torridge estuary, North Devon (a tide-dominated environment impacted by flooding), the team developed methods to predict future shoreline positions and sea-level rise over a range of periods. The final output was a clear, concise methodology for use by any LPA, which could deliver the underlying science needed to support of the process of designating CCMA's. The team trialled this methodology in the case study areas and provided training support to the LPAs in its use.

## Impacts & benefits delivered



### Attitudinal/Capacity

**Increased knowledge, confidence and skill sets:** within the case study LPAs to engage with, and drive the CCMA process forward.

**Enabling Project Partners:** Natural England, the Environment Agency, Marine Management Organisation and Heritage England - and their stakeholders to reengage and reinvest in the CCMA process which will accelerate further uptake both within and beyond the South West.



### Organisational Function

**Accelerating LPA ambitions to deliver CCMA coastal change work:** at the LPAs request, SWEEP has now extended CCMA mapping for the Taw Torridge Estuary and Sidmouth study sites, saving each partner c.£50k. Strengthened a funding application by Torrridge District Council - to the Innovative Resilience Fund for developing new approaches to solving flooding and erosion risk.



### Policy & Legislation

**SWEEP- informed CCMA:** are now recommended for official adoption into partner LPA Local Plans. In the interim, they are being recognised as a key component of the 'best available material consideration' for planning and development decisions and coastal resilience funding applications.

### Informing coastal management decisions:

for example, through 'Shoreline Management Plan Refresh' work and the Marine Management Organisation '[Explore Marine Plans](#)'.

### Influence on national policy and uptake of CCMA:

a SWEEP CCMA methodology briefing document [add hyperlink] has been developed and dissemination widely. Through our partners this will feed into and strengthen the National Planning Policy Framework, contributing to more robust guidance on identifying and demarcating CCMA and thus further improving the rate of CCMA implementation by LPAs not only for the South West but for other regions around the UK.



*The SWEEP approach was invaluable in bringing together all key stakeholders, including the Environment Agency and Natural England, to shape and move the CCMA work forward and increase our confidence in this area."*

**Ian Rowland, Senior Planning Policy Officer, Torrridge District Council**



*Information from the SWEEP CCMA is helping us take a new approach to an adaptive pathway, thus strengthening our submission."*

**Chris Wilson, Coastal Engineer, Torrridge District Council**



Current cliff position (black line) with predicted cliff retreat and buffer zones over 20, 50 and 100 years



*SWEEP work allowed us to successfully make a case to include CCMA in our Devon, Cornwall and Isles of Scilly team plan. On the back of this, we are currently recruiting a new lead advisor for our coastal work, including CCMA."*

**Corine Dyke, Lead Advisor, Natural England**

## Looking to the future

Drawing on the SWEEP methodology briefing document, the team continues to work closely with LPA partners, Natural England and the Environment Agency, to drive forward and monitor the uptake of the methodology and designation of CCMA in the South West and beyond, and its influence on the CCMA guidance in the National Planning Policy Framework. This work has been continued through a PhD studentship supported the University of Plymouth and the Environment Agency.

### Underpinning NERC Science

Previous work as part of the NERC-funded BLUECoast project is an early example of the group's expertise in making coastal research relevant to policy and planning.

### About SWEEP

The South West Partnership for Environmental & Economical Prosperity (SWEEP) is a partnership between the University of Exeter, the University of Plymouth, and Plymouth Marine Laboratory. Funded by the Natural Environment Research Council and stakeholders together to solve key challenges faced by those working with our natural resources. [www.swEEP.ac.uk](http://www.swEEP.ac.uk)

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