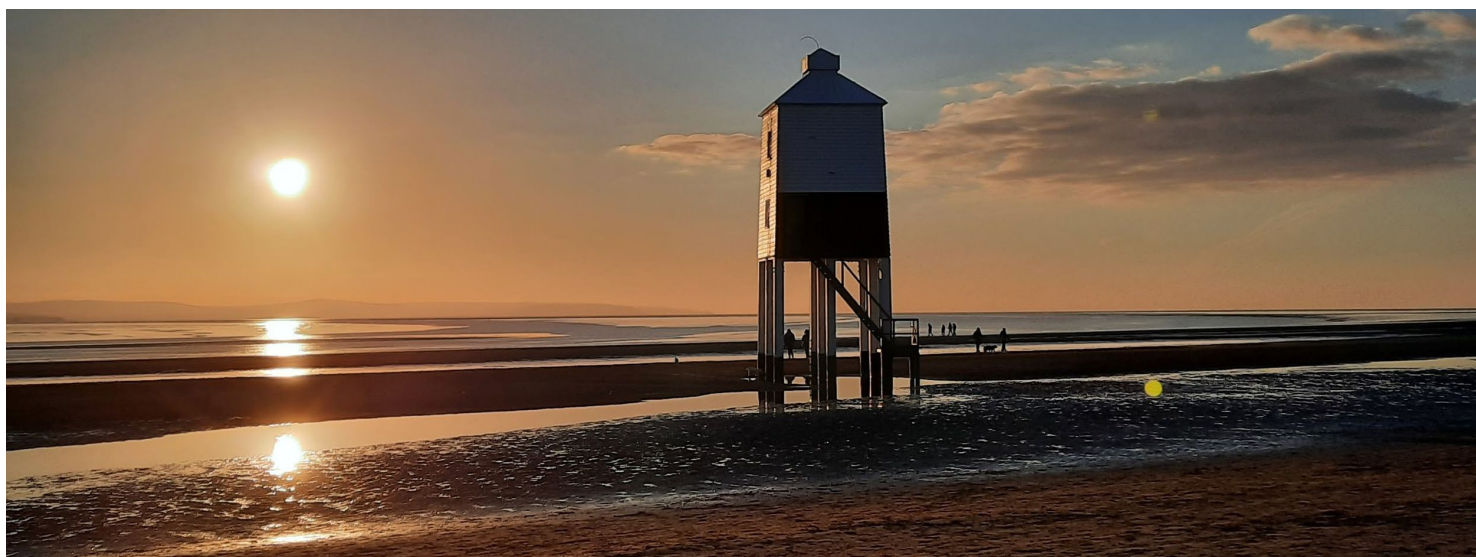


Cloud-to-Coast Adaptation: Enabling a flood resilient future



A co-convened workshop
between the Interreg North
Sea Region C5a project and
the Environment Agency

30th March 2022
Online

Context

Two-thirds of European citizens are expected to be at particular risk from climate change and weather-related events by the year 2100 (Krona et al., 2019). Countries with significant coastal populations will be particularly affected, including The North Sea Region (NSR), where communities are vulnerable to changes in sea level and added storminess. Inland, increased rainfall intensities and volumes will increase localised fluvial and pluvial flood risks. Estimates of the expected annual damages in Europe by the 2080s from coastal flooding are €17.4 to 25.4 billion (currently €1.9 billion) and from fluvial flooding, €97.9 billion (currently €5.5 billion), unless strong prevention and adaptation policies are implemented (EU, 2014). Vulnerabilities are especially intense for parts of the NSR, such as cities and seaports, which comprise some of the most active global transport and commerce hubs. Hence, flood protection is vital for the NSR, with investments potentially yielding a benefit-cost ratio between 7:1 and 10:1 (World Bank, 2014).

The conventional response to these challenges has been to deliver project-based infrastructure responses. It is increasingly recognized that a local 'defence' paradigm alone is unable to manage risk whilst continuing to promote liveable cities, ecosystem health and social well-being. A new approach is required that is purposeful, collaborative and takes a whole-system, long term view.

Motivation for the workshop

In 2019 the EU funded the C5a 'cloud-2-coast' project¹ that brings together government authorities and researchers from across the North Sea Region (NSR) to share the policy, practice and emerging science of adapting to climate change and enabling flood resilience. Despite the heterogeneity of the NSR, national to local governments face many common challenges and through C5a several insights have emerged to enabling progress. During 2020 Environment Agency launched its new strategy for flood risk management². Central to this strategy is the need for flood and coastal risk management to meet the challenge of climate change. The themes of resilient communities and promoting an adaptable approach are all important to the aims of the strategy. Subsequent a series of pathfinder projects have been established to provide exemplar of how to do this in practice.

This workshop seeks to share information, including emerging science, policy and practice between all those involved in adapting to climate change and managing flood risk. The workshop aims to help address barriers to adaptation by providing practical and innovative solutions based on a whole system understanding, adaptation pathways and inclusive decisions.

Practical information

Virtual : [Click here to join the meeting](#)

When: 30th March 2022, 9.30am-2pm

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Technical contact: paul.sayers@sayersandpartners.co.uk

Organisation of the day

The workshop will be run as a series of presentations followed by an extended interactive discussion to elicit '**how we can deliver adaptation in practice - what are the opportunities and barriers**'. The presentations will be drawn from the selected abstracts (including submissions from C5a and Environment Agency pilot programme). The Panel will be Co-Chaired by Rijkswaterstaat (Matthijs Boersema) and the Environment Agency (Jim Barlow) supported by representation from the other Risk Management Authorities, Researchers and Consultants.

¹ <https://northsearegion.eu/c5a/>

² [National Flood and Coastal Erosion Risk Management Strategy for England - GOV.UK \(www.gov.uk\)](#)

Outline of the day

Time (Minutes)	Activity
09:30 (10)	<i>Welcome to the meeting</i> Jim Barlow : Deputy Director, Asset Performance and Engineering
09:40 (15)	<i>Setting the scene</i> The continued evolution of adaptive management in the England and the Netherlands; Andy Eden Environment Agency and Matthijs Boersema Rijkswaterstaat
09:55 (15)	Cloud-to-Coast framework of adaptation – summary framework and policy recommendations Paul Sayers (SPL)
Part I - Emerging examples of adaptive management: Pilots from the England and the NSR Examples of adaptive responses to climate change	
10:10 (15)	Example #1 – Developing an adaptation pathway for the Humber, England: Bringing stakeholders with you. Faith Spencer , Environment Agency
10:25 (15)	Example #2 – Long term adaptation to sea level rise: Saskia van Gool , Rijkswaterstaat
10:40 (10)	Reflection on Examples #1 and #2
10:50 (10)	Coffee break
11:00 (15)	Example #3 – Adaptation planning in Severn, England. Steve Lawrence , Environment Agency
11:15 (15)	Example #4 – Redesigning Deltas, moving from adaptive planning to planned adaptation: Chris Zevenbergen , TU Delft & IHE Delft
11:30 (10)	Reflection on Examples #3 and #4
11:40 (20)	Breakout #1: Round table discussion (facilitated by Paul and Berry) Do these examples deliver resilience? Are these examples, what we mean by an adaptive approach? If not, why not? If yes, what makes them 'adaptive'?
12:00 (30)	Lunch break
12:30 (15)	Reporting back and plenary discussion (facilitated by Paul and Berry) Reporting the characteristics of an adaptive approach (and associated illustrations from the presentations or other examples from your own experience).
Part II - Supporting successful adaptive management Focusing on the how to make it happen in practice – from making the case to the design details	
12:45 (15)	Adaptation planning in South Yorkshire, Amer Bhatti , Environment Agency
13:00 (15)	Funding multiple outcomes – Flood risk management as a leverage for sustainable urban development in Dordrecht: Berry Gersonius , City of Dordrecht
13:15 (10)	Reflection
13:25 (15)	Breakout #2: Structuring the knowledge agenda (facilitated by Paul and Berry) What are the priority needs for progress - research gaps, communications, opportunities of cooperative learning – principles of adaptive planning
13:40 (10)	Tea break
Part III Next steps	
13:50 (10)	Plenary discussion : Chaired by Andy Eden and Matthijs Boersema <i>What is a Cloud-to-Coast approach to flood management in practice – what does it look like? How do we get there?</i>
13:55 (5)	Summary reflection : Andy Eden and Paul Sayers
14:00	Close

Partners

C5a brings together local authorities and leading scientists (with domain expertise) to share and develop innovative solutions to the management of flood protection assets.



Värmland County
Administrative Board



Rijkswaterstaat
Ministry of Infrastructure
and Water Management



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