Infrastructure resilience under a changing climate: the urgent need for engineers to act

Introduction: Research overview

This research explores the challenges and progress in adapting to climate change, and the tools available for engineers to act, now, to enable infrastructure resilience for extreme weather that we experience now and in the future.

Why the research is needed?

Our climate is changing, and infrastructure organisations must consider whether their infrastructure assets can operate in the different climate that we will experience in the future.

Climate projections show that the UK will have hotter drier summers, and milder wetter winters. Rainfall events are increasing in frequency and magnitude – i.e. more rain can fall in a shorter period, which can lead to flooding.

Infrastructure on or near the coast needs to prepare for higher sea levels and associated hazards such as flooding, erosion and storm surges.

Research questions

We put out a call for arms – engineers need to act now, to embed climate adaptation within their operations. It is also important that we teach engineers about climate change so they can design infrastructure for the future that supports decarbonisation and is ready for future weather.

Methodology

There are different tools to support climate adaptation. These include:

Climate change risk assessments

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Developing adaption pathways to prepare for climate action

How is the research influencing change?

The University of Birmingham team continues to work on several exciting resilience projects, including:

WM-Adapt

A project working with the West Midlands Authority to deliver a step-change in adaptation across the region.

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Carmine

A project that's developing climate-resilient development pathways in eight metropolitan case study areas across Europe, including Birmingham.

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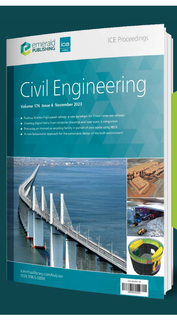
Completing the infrastructure chapter of the **4th UK climate change risk assessment (CCRA4) technical report for the Climate Change Committee.**



Find out more about the research by reading the full article here.

The article:
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