

RisKma: Real-Time Flood Forecasting Through International Innovation and Collaboration

Technical Skills Talk



**Flood &
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Flood risk is increasing worldwide due to climate change, urbanisation, and more frequent intense rainfall.

Effective flood risk management relies on timely, accurate information and decision support tools that enable proactive rather than reactive responses.

RisKma, a real time flood monitoring and forecasting platform developed through collaboration between:



We are exploring its use in UK surface water flood management.





RisKma is a web based platform that integrates:

- | | |
|---|------------------|
| Forecast Rainfall | Water-Level Data |
| Sensors | CCTV Imagery |
| Real time hydraulic modelling in a single interface | |

Updated every 15 minutes, it provides advance warning of flood risk, visualises predicted inundation pathways, and stores simulation outputs for post event analysis.

The platform is widely used by public authorities and developers in Japan, where fast, reliable flood response is essential.

Key Features

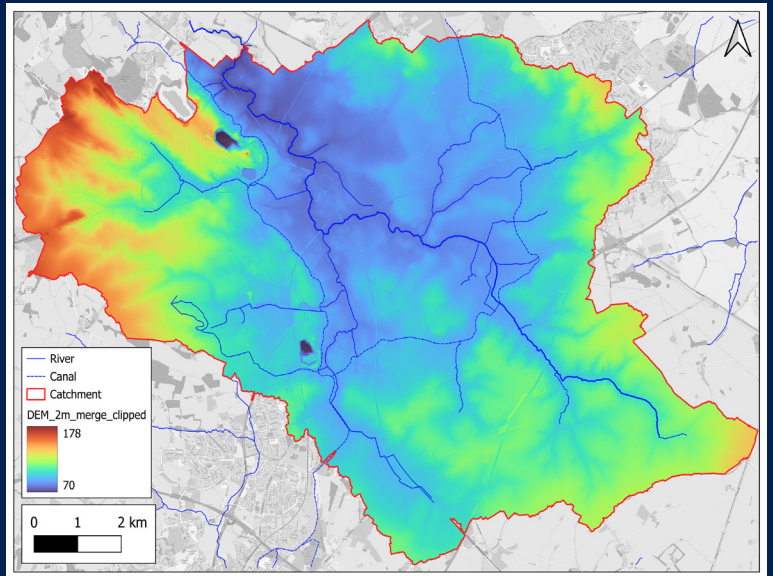
- Observation Data
- Forecast Rainfall Data
- River Water Level Prediction
- Alert Information
- CCTV camera



RisKma
水災害リスクマッピングシステム

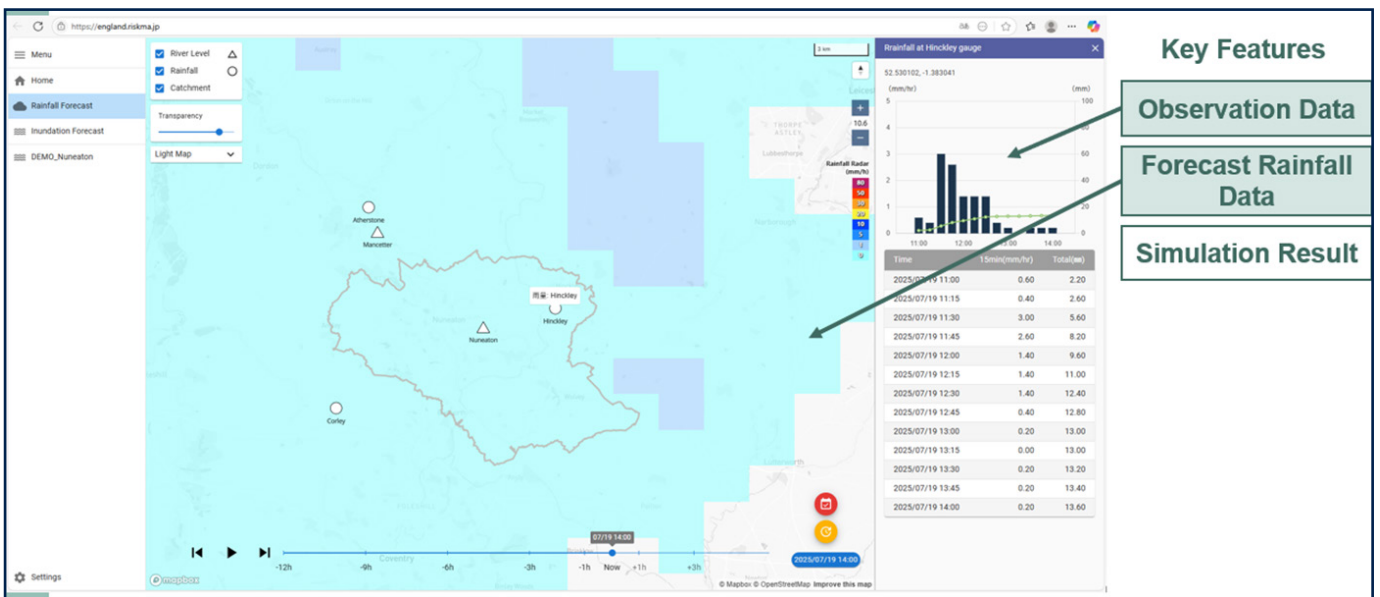
Case study

We have been working with Warwickshire County Council's Lead Local Flood Authority team to develop a pilot study - focused on surface water flood risk in locations where traditional defences are not viable and Property Flood Resilience (PFR) is often the main mitigation option. A trial location of Nuneaton in Warwickshire was selected as the pilot study area.

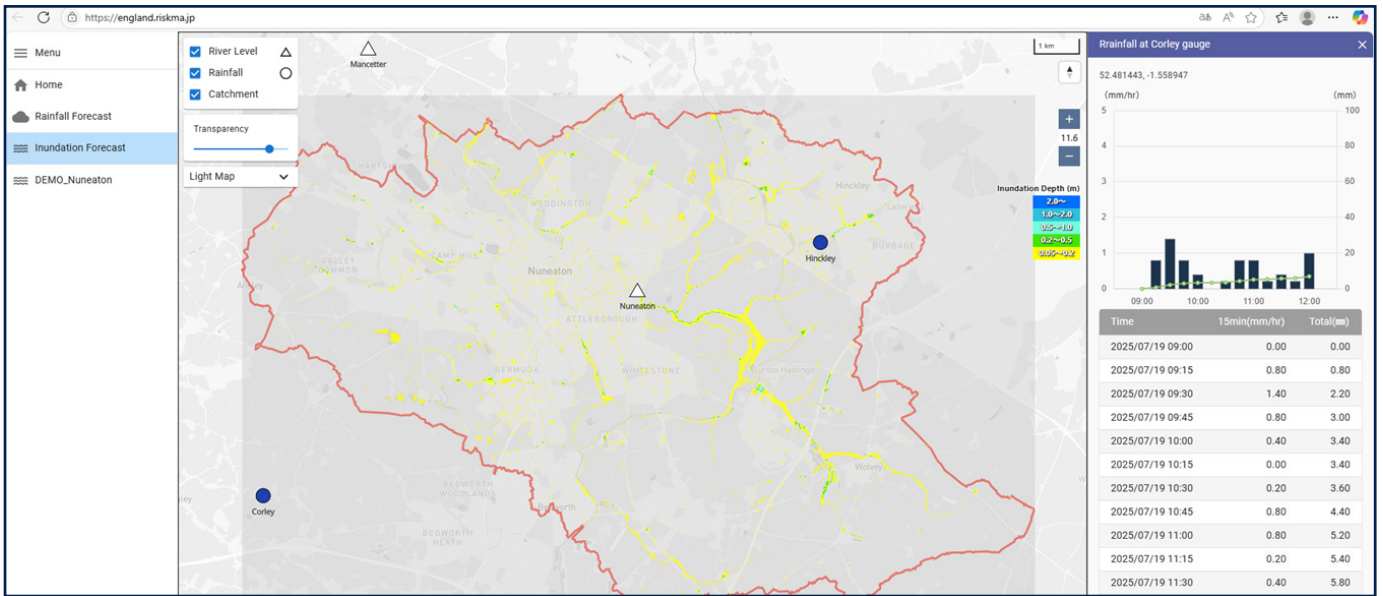


The pilot examines challenges around accuracy, consistency, cost, and community confidence when issuing flood alerts. Its aim is to show how real time forecasting can improve warning reliability, support emergency decision making, and reduce anxiety in flood affected communities.

A secondary use of RiskMa we are exploring is the ability to retrospectively use the tool to examine past rainfall events and flood flow routes as an evidence-based tool to assist with flood risk management business cases and Section 19 reporting.



The RiskMa pilot study has been able to predict and replicate a number of flood events since the trial began, such as this event from the 19th July 2025.



Through a live demonstration and early findings, this session aims to highlight the value of:

International Knowledge Exchange

Digital Innovation

Cross Organisational Collaboration

All in strengthening flood resilience across the UK

Key contacts



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