

Flood and Coastal Erosion Risk Management R&D Programme and National Operations

A new flood hydrology road map

A new vision for flood hydrology

We are working with others to outline a future vision for flood hydrology and a plan to deliver that vision.

What is flood hydrology?

Hydrology is the science that tracks water from the sky to the sea. For flooding we use hydrology to convert rainfall and snow into flows for forecasting purposes or to estimate long-term flood risk. We also use hydrology to understand how catchments respond to changes in landscape, to understand the role of lakes and groundwater and to design and manage dams and urban space. Hydrology underpins all our inland flood risk work.

Why now?

It is time to act because:

- Many of the methods we use are dated and based on approaches developed in the 1970s-1990s.
- We need to reflect that risk changes over time
- We have to understand the spatial nature of flooding and the effect of interventions across catchments;
- The National Flood Resilience Review calls for an ambitious, long-term, joined-up approach to hydrology and meteorology for flood events.
- We are seeing disparate and competing hydrology research proposals in the Defra/EA Joint Research Programme. The roadmap will allow us to bring these needs together and prioritise them properly.

Changing mind-sets

We want hydrology users and experts to work together using their knowledge to plan the short-term and long-term future of flood hydrology. We want to change mind-sets to alter the way we approach hydrology so it will be fit for flood risk management now and in future.

Who is involved?

Although this is Environment Agency led, it is for all of us. We will work with government, academics and industry.

What will we do?

The roadmap project will:

- Develop a vision of flood hydrology 10-20 years from now
- Create a list of prioritised research needs to influence research councils, our joint EA/Defra R&D programme and the wider research community
- Create a list of prioritised user needs and how we will address them.
- Create a strong community of flood hydrology expertise
- Improve awareness of how important flood hydrology is to the flood risk industry

Who is it for?

At the Environment Agency, our responsibility is limited to England, but the Joint R&D Programme serves England and Wales. We hope by working with the right partners, our project outputs could be used across the UK. The project will cover all inland flood risk sources: rivers and lakes, surface water, groundwater and reservoirs.

What next?

We are taking a staged approach. First we will collect ideas from a small group of selected stakeholders and hold a workshop after the summer break. We will then consult more widely in the autumn.

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