Research and analysis: Optimising the accuracy of radar products with dual polarisation

Rainfall forecast data generated at the Met Office is vital for providing weather and flood warnings, and this project has looked at ways of improving the accuracy and reliability of the radar network as well as fully exploiting and bringing into operation the latest technology.

Radar is particularly important in detecting localised rainfall (often not detected or under-sampled by rain gauge networks), especially where it falls on catchments prone to flash flooding. The upgrade to the UKs dual polarisation radar network in 2016 and the updated data analysis methods from this study means that we can make a step change in the accuracy of rainfall estimates, in particular in very intense precipitation, where radar estimates are most valuable.

Research and analysis: Trialling a new approach to beach replenishment in Poole Bay

The trial tested a new approach to beach replenishment in Poole Bay. The concept was to make use of locally dredged sediment and place it near the shore, allowing the prevailing waves and tidal currents to move material toward and along the beach. A similar approach has been used widely in the Netherlands and more recently in Denmark. The trial was the first of its kind in the UK.

Research and analysis: Understanding the performance of flood forecasting models

Understanding the performance of the flood forecasting models operated in

real-time by the Environment Agency, Natural Resources Wales and the national Flood Forecasting Centre is crucial to the informed use of model outputs for flood guidance across England and Wales. It is also essential to guide future strategic investment in flood incident management.

This report presents the results of the first nationwide analysis of the performance of the various flood forecasting models operated by local centres on the National Flood Forecasting System. The analysis is based on Wales and the English geographical regions that align to the old Environment Agency region names.

Research and analysis: Sediment budget analysis: practitioner guide

The Environment Agency has developed a practitioner's guide on sediment budgets. The guide's main aim is to support flood and coastal erosion risk management practitioners by explaining the need for sediment budget analysis and developing best practice in its application. Use of the guide will provide consistency in the execution and interpretation of sediment budget analysis. It will also help to improve the transparency of decision-making, as the consistent approach will mean stakeholders have greater understanding in the supporting evidence used to calculate a sediment budget.

A sediment budget summarises the balance of inputs and outputs for a defined system (such as an estuary) and time period. This helps determine if a system has an overall surplus (accretion) or deficit (erosion) of material. If the accretion and erosion figures are equal, then the system is considered to be in balance.

Form: Part RSR-B7: apply to keep radioactive material and accumulate and dispose of radioactive waste following its unintentional receipt

Updated: We have updated application form and form guidance.

You must complete this form to apply to keep radioactive material and

accumulate and dispose of radioactive waste following its unintentional receipt.

Refer to the guidance document for help with completing the form.