

Joint Defra / EA Flood and Coastal Erosion Risk Management R&D programme

Background to R&D project

This project was commissioned in 2002 when areas of the UK had experienced flooding on various scales and post event appraisals illustrated the need for guidance on how such appraisals might best be undertaken. This project was intended to examine the benefits, costs and use of post event appraisal, particularly in assessing performance of flood management activities.

The study was undertaken by Bullen Consultants with additional expertise provided by JBA Consulting. The work included a review of procedures and systems of monitoring, data collection and post event appraisal currently undertaken, as well as requirements for the training of staff in monitoring, data collection and post event appraisal. It identifies indicator themes that cut across the whole flood and coastal defence industry and also provides an assessment of the effectiveness of practices in performance evaluation.

Results of R&D project

The study found that post event analysis needs to be better integrated as part of the flood and coastal erosion risk management operational and research programmes. This study includes specific conclusions and recommendations relating to the need for:

- national consistency
- inclusion of wider issues, especially the human, community and social impacts
- assessments of operational responses (such as communications, and emergency planning) and long term recovery as well as physical drivers and defence performance
- data collection, storage and sharing between organisations including the exploitation of technological advances
- clear assessments of the benefits associated with post event appraisals



The study concludes that post event appraisals provide substantial value and this was reflected by the majority of respondents who consider that there are great benefits in undertaking post event data collection exercises and appraisals. Similarly it was found that operating authorities consider that data collected during post event exercises are vital to improve management of flood and coastal defences, although concern was expressed about the availability of resources. It was also suggested that overseas practices are no further developed than in the UK.

R&D Outputs and their Use

The Technical Report presents a framework of best practice for post event data collection. The first volume of the Project Record describes the studies and main conclusions and the second volume gives the results of a detailed questionnaire survey into current post-event data collection and appraisal.

The three reports provide a succinct review of the effectiveness of current methods for post project appraisal and of flood and erosion events appraisal and subsequent performance evaluation. They also identify future needs, benefits and costs and make recommendations for further work to improve efficiency of post project and event appraisals. They provide guidance to identify the need and scope for the development of a working "pilot" post event appraisal "system" to inform subsequent policy, strategy and decision-making processes, engineering design, managerial and operational procedures and performance evaluation.

The additional work recommended within the reports has not been commissioned within the joint Defra / EA R&D programme. Primary responsibility for incorporating the results of this study into internal operations systems lies with the Environment Agency and, where appropriate, other operating authorities.

This R&D Technical Summary relates to R&D Project FD2012 and the following R&D outputs:

- **R&D Technical Report FD2012/TR: Post event appraisal – (Outline) Best practice guide. Monitoring, recording and analysing events.** Published June 2005.
- **R&D Project Record FD2012/PR1: Post event appraisal – Report of studies. Monitoring, recording and analysing events.** Published June 2005.
- **R&D Project Record FD2012/PR2: Post event appraisal – Questionnaire survey. Monitoring, recording and analysing events.** Published June 2005.

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The above outputs may be downloaded from the Defra/EA Joint R&D FCERM Programme website (www.defra.gov.uk/enviro/fcd/research). Copies are also available via the Environment Agency's science publications catalogue (<http://publications.environment-agency.gov.uk/epages/eapublications.storefront>) on a print-on-demand basis.

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