

# Development and dissemination of the Estuaries Research Programme

Technical Summary: FD2119

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

### Background to R&D project

Estuaries are subject to pressures from the risks associated with flooding and commercial developments as well as environmental aspects associated with water quality and habitats. The understanding of estuary processes and morphology, and the ability to predict change, is a key part of the toolbox available to estuary managers seeking to manage flood risk and the environment. Research on this aspect of estuary management has been carried out since 1998 following the plan for the Estuaries Research Programme set out in 1997.

Phase 1 was the EMPHASYS project which completed in 2000 and since then, in Phase 2, a wide range of projects have been completed on various aspects of process and morphology culminating in project FD2119 which was designed to bring together and disseminate the work that had been done for the benefit of the user community. The project developed the earlier Estuary Impact Assessment System (EIAS) and brought forward recent information from the research to inform the scoping of an Estuary Management System (EMS). It also made suggestions for future estuary research.

The project was commissioned by the Defra/Environment Agency Joint Flood and Coastal Erosion Risk Management Modelling and Risk Theme. It started in September 2006 and was completed in March 2009.

### Results of R&D project

The EIAS has been developed and delivered in the form of a web-based resource called the Estuary Guide: [www.estuary-guide.net](http://www.estuary-guide.net). This provides a readily accessible and comprehensive resource for anyone undertaking work in estuaries and provides help in selecting appropriate methods for evaluating and predicting morphological behaviour. The website provides easy access to outputs from Phases 1 and 2 of the Estuaries Research Programme (ERP). Training was provided in the use of the Estuary Guide and associated resources arising from the ERP in November 2007. The presentation materials are available for reference from the Estuary Guide website.

The recommendations from ERP2 projects have been brought forward and synthesised in terms of possible further developments and research over the next 3 to 5 years. The research is required to underpin the delivery of the EMS and associated modelling tools. The scope of an EMS which can support existing initiatives on flood risk assessment and recommendations for a programme of work in ERP3 are presented. This includes links which could be made to the Modelling and Decision Support Framework project (MDSF2).



The project has referenced the developments for the next generation of modelling tools and datasets that are required for the EMS, both in support of flood risk assessment and also in relation to the needs of environmental studies in estuaries.

A final seminar workshop of the project was held in March 2008. Presentation material from that event is also hosted on the Estuary Guide website.

## R&D Outputs and their Use

The project has compiled a comprehensive set of information on the internet web site [www.estuary-guide.net](http://www.estuary-guide.net)

It has produced three reports:

Whitehouse, R.J.S., Beech, N.W., Jackson, C.D. and Townend, I.H. (2007). Inception Report. Development and dissemination of the Estuaries Research Programme. R&D Technical Report FD2119/TR1 prepared for the joint Defra/EA Flood and Coastal Erosion Risk Management R&D Programme. April 2007.

Beech, N.W. and Whitehouse, R.J.S. (2007). Report on initial consultation. Development and dissemination of the Estuaries Research Programme. R&D Technical Report FD2119/TR2 prepared for the joint Defra/EA Flood and Coastal Erosion Risk Management R&D Programme. September 2007.

Whitehouse, R.J.S., Beech, N.W., Townend, I.H., Jackson, C.D., Williams, A. and Surendran, S. (2008). Final Report. Development and dissemination of the Estuaries Research Programme. R&D Technical Report FD2119/TR3 prepared for the joint Defra/EA Flood and Coastal Erosion Risk Management R&D Programme. April 2008.

The information in these outputs is for use by Defra and Environment Agency Staff, researchers and consultants who have responsibility for overseeing, specifying or conducting morphological studies in estuaries.

This R&D Technical Summary relates to R&D Project FD2119 and the following R&D output:

**R&D Technical Report FD2119/TR2 and TR3 – Development and Dissemination of the Estuaries Research Programme.** Published August 2008.

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The above outputs may be downloaded from the Defra/EA Joint R&D FCERM Programme website ([www.defra.gov.uk/environ/fcd/research](http://www.defra.gov.uk/environ/fcd/research)).



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