

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

Background to R&D project

In March 2005 the Government launched a new UK sustainable development strategy - "Securing the future" that set out a new purpose and principles for sustainable development with priorities agreed across the UK, including the devolved administrations (HM Government, 2005) .

In the same month, the Government published its first response to "Making Space for Water", the consultation exercise for developing Government strategy on flood and coastal erosion risk management in England. The new strategy aims:-

To manage risks by using a range of measures that reflect both national and local priorities to:-

- reduce the threat to people and their property; and
- deliver the greatest environmental, social and economic benefit consistent with the Government's sustainable development principles.

The emphasis in the new strategy on managing risks and clear alignment with the Government's Sustainable Development Strategy provides an opportunity for more sustainable flood and erosion risk management in England and Wales. This report aims to develop principles and guidance to help policy makers and practitioners make better decisions that deliver the greatest environmental, social and economic benefits.

Results of R&D project

In order to develop a framework for sustainable flood risk management, this research has used the Government's vision and aims as stated in the response to "Making space for water". The report proposes nine principles of sustainable flood and coastal erosion risk management:-

1. **Risk Management.** Manage flood and coastal erosion risks to people and property, the economy and the environment.
2. **Adaptation.** Take account of climate change and other long-term uncertainties in decision making.



3. **Resilience.** Develop infrastructure and buildings which perform satisfactorily under a wide range of lifetime flood and erosion loadings, without suffering permanent loss of functionality during extreme events.
4. **Integration.** Develop solutions that integrate flood and erosion risk management as part of integrated catchment management and coastal zone management.
5. **Engagement.** Work with all those affected by flooding and erosion, empowering those affected to take appropriate actions to reduce risks.
6. **Appraisal.** Adopt appraisal methods that are rigorous, coherent and open and consider long term social, environmental and economic costs and benefits.
7. **Environment.** Protect natural resources and enhance the environment where it is most degraded.
8. **Consumption & Production.** Promote sustainable consumption and production in all flood and erosion risk management activities.
9. **Knowledge.** Develop the knowledge, skills and awareness to improve our understanding of risk and to promote sustainable solutions

R&D Outputs and their Use

Technical Report 1 provides full details of the proposed principles and eleven 'Topic Notes' that summarise and link to existing information and highlight key sustainability issues relating to: Sustainability Appraisal, Community Engagement and Sustainable Development, Appraisal of solutions & schemes with multiple objectives, Compulsory purchase & legal aspects of flood management, Planning and flood risk, Rural development and flood risk, Adaptation and resilience, Precautionary climate change allowances, Wise use of materials, Using Catchment Flood Management Plans (CFMPs) and Using Shoreline Management Plans (SMPs).

A second Technical Report describes the outputs of 7 case studies and the research Project Record provides information on the process of how the research was completed and further information for flood risk researchers.

This R&D Technical Summary relates to R&D Project FD2015 and the following R&D output:

R&D Technical Report FD2015/TR – Sustainable Flood and Coastal Erosion Risk Management. Published March 2007.

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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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