

The Appraisal of Adaptation Options in Flood and Coastal Erosion Risk Management

Technical Summary: FD2617

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

Background to R&D project

Government spending on flood and coastal erosion risk management (FCERM) has increased substantially in recent years, but there could still be several hundred thousand properties at risk of flooding in the future, particularly given the likely effects of climate change. “Making Space for Water” highlighted the importance of alternative approaches to managing flood risk, including promoting adaptation and resilience measures with individual households, communities and businesses in England. The research reported here explores the challenges and barriers to adaptation measures and identifies potential means of overcoming those barriers.

Results of R&D project

Evidence was gathered through a technical review of relevant literature, a series of qualitative interviews with a range of stakeholders, and a stakeholder workshop. A number of interconnected and inter-related barriers were identified. Case studies were used to test potential solutions to overcome those barriers and to identify enablers.

For this research, we define adaptability as those characteristics of a plan, strategy or scheme that sustain and enhance the function of a system in the face of continuing change or uncertainty. It is about building in flexibility, enabling evolution of not only the strategy or scheme, but also *the function of the system*. Change and uncertainty arise from many sources, and climate change is an important source.

We found that the appraisal system itself does not present significant barriers to more adaptable options, although there are some areas where relatively minor changes to guidance would help. The key barriers identified included a tendency to frame problems - and therefore briefs for work – somewhat narrowly, in terms of protection rather than maintaining system functionality in the face of change. Practitioners’ past experience of what might be funded constrains thinking, along with a perception of what benefits can be paid for from which funding source. The complexities of dealing with multiple stakeholders and multiple funding sources presents a barrier to many more adaptable options.



Many of the barriers identified are exacerbated by lack of evidence relating to more adaptable responses; a result of their relative novelty. There is a lack of awareness of examples of more adaptable responses with evidence of their efficiency, effectiveness, costs and benefits, options for funding etc for practitioners to draw on. Our research suggests that while good examples exist, they are not always recognised as such (which is, in itself, a barrier).

Several imminent changes to appraisal guidance (the introduction of appraisal summary tables, scoring and weighting, and a disaggregated presentation of costs and benefits) will help to overcome some of the barriers, and a number of further suggestions are made.

These include making sure that project briefs are broad and framed in terms of the function of the system, and the creation of a repository of examples of more adaptable thinking and practice, as well as some suggestions relating to operational guidance for appraisal.

R &D Outputs and their Use

The key output from research is the technical report, which outlines how the research was carried out, reports on the technical review conducted, describes the barriers identified and lessons learned from case studies, and makes a number of suggestions to help overcome the barriers identified and use enablers.

This R&D Technical Summary relates to R&D Project FD2617 and the following R&D output:

R&D Technical Report FD2617/TR – The Appraisal of Adaptation Options in Flood and Coastal Erosion Risk Management Published March 2010.

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The above outputs may be downloaded from the Defra/EA Joint R&D FCERM Programme website



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