Joint Defra/Environment Agency Flood and Coastal Erosion Risk Management R&D Programme

Strategy and Policy Development Theme – RO Statement

Programme vision

This SPD programme will cover areas of strategic national interest and areas of developing policy. Currently the main developing policy areas are those identified in the Making Space for Water Implementation Plan, although these will change with time and there is a need for a broader horizon-scanning role to consider longer-term requirements. In general, once a policy line and the underlying case for adoption is established then it is expected that further research to support or improve delivery would pass to one of the other theme areas (or in some cases to another Division in the Department).

The programme will, therefore:

- Support Evidence and Innovation (E&I) to all key policy areas covered by the 'Making Space for Water' (MSW) implementation programme.
- Review strategic level E&I needs of other linked policy areas.
- Commission evidence work to meet identified requirements from both R&D and consultancy budgets, as appropriate
- Use longer term horizon scanning to support research needed for policy development 2010-2020.

Overall objective	Beneficiary groups	Baseline/evaluation criteria
Risk from flooding and coastal erosion is managed in a way which furthers sustainable development.	The people, communities and businesses in or adjacent to areas of flood and coastal erosion risk and others who benefit from an effective and efficient programme of risk management; EA FRM Policy, Process and Operational teams; Local Authorities, Drainage Boards, other operating authorities and Emergency Services.	From a baseline of some £1.2 billion of annual economic residual damage, the aim is to support programmes of sustainable flood risk management with effective guidance, appropriate knowledge and information and sound decision making techniques. Proposed evaluation criteria are described against individual objectives below.

Specific objectives	Officials responsible for benefit delivery	Baseline (B)/ Evaluation criteria (EC)
1. Development of Environment Agency strategic overview taking account of influence of changing attitudes, demographics and economics on FCERM governance.	MSfW HA1, SRO (Defra)	B: 2005/6 governance systems EC: Changes in governance arrangements by 2008/9 that are soundly based on evidence/trials and take account of predicted socio-economic/other changes

2. A more integrated approach to urban flood issues: Reconciling the needs of multiple players, managing flood risk in relation to other issues, integrated urban drainage planning, strategic approaches to flood resilience and urban sub-catchment run-off.	MSfW HA2, SRO (Defra)	B: Generally fragmented delivery with isolated examples of good collaboration. EC: Through pilot trials (separately funded) and supporting research, identify, by 2008, a framework and route map for adoption of more integrated approaches to urban flood risk management
3. Improved understanding of groundwater flood risk with clearer allocation of responsibility and public understanding of both the level of risk and the feasible solutions that are likely to be available.	MSfW HA4/5, SRO (EA)	B: No clear responsibility for groundwater flooding EC: Any supporting policy research completed by 2008 (modelling and mapping developments will be supported through the MAR theme and forecasting through IMCE).
4. Improved understanding of the impacts of land management on flood risk elsewhere, including the effect of reducing levels of agricultural flood protection on areas downstream, impacts on the Agricultural industry, the effectiveness of funding mechanisms and other land use policy levers.	MSfW HA6, SROs EA + Defra)	B: Diverse opinions on effectiveness of different measures EC: Convergence of views between key stakeholders based on improved evidence and understanding through pilots, trials and supporting policy and social research (also dependent on modelling and process studies supported by MAR)
5. Identifying the barriers & incentives to deliver better environmental & social outcomes: Taking into account WFD, impacts of climate change.	MSfW SA1, SRO (EA)	B: Stakeholder perception of significant barriers in current guidance and practice. EC: Revised guidance supported by sound evidence to reduce perceived barriers.
6. Development of 'Adaptation Toolkit' covering novel forms of coastal erosion risk management that can improve acceptability of sustainable coastal management practices that result in property and land loss	MSfW SA2, SRO (Defra)	B: Concern at inequity of decision making system EC: Development of widely accepted 'toolkit' that is practical and affordable in national policy terms with acceptable explanation of remaining limitations
7. Broadening outcome definition and risk management tools and guidance: To improve economic appraisal methods and other economic methods to account for changing demographics/economics, societal values and preferences	MSfW SA3, SRO (Defra)	B: Current guidance to be updated in light of subsequent research and enhanced expectations raised through MSfW consultation. EC: Continuing improvements in the comprehensive assessments of flood risk at national, regional and local levels. Soundly based policy guidance on appraisal issued by Defra in 2007 with subsequent updates as required and supported by compatible Agency guidance on practical implementation.
8. Review recommended approaches to Climate Change: Determine the impact of climate change on flood flows, sea level, surges and waves and review existing indicators and FCERM standards and practises, defining new ones where required.	MSfW SA5, SRO (Defra)	B: Current recommended allowances (2004) EC: Improved guidance available in 2007 (with SA3) and subsequent updates at no greater than 3 year intervals based on sound

Research at national and regionalised level is required.		interpretations of wider climate change research.
9. Building stakeholder and community engagement: Consultation (methodology) and communication with all those affected by FCERM is required to determine what level of risk is acceptable and to determine the most effective way of maintain a level of public awareness.	MSfW SA6, SRO (EA)	B: Stakeholder consultation arrangements as set out in MSfW initial response, 2005. EC: Identification and wider adoption of more inclusive and accepted engagement processes.
10.Land Use Planning (Defra/ Environment Agency inputs): Including development and flood risk, and the integration of FCERM and spatial planning.	MSfW SA8(pt), SRO (Defra)	B: PPG25 EC: Revised PPS25 in 2006 with evidence-based input to any subsequent guidance, as required
11. Encouraging and incentivising increased resilience to flooding: Improving resilience in urban flood protection and the use of temporary defences for individual properties	MSfW RR1, SRO (Defra)	B: No national policy for resilience and limited use of temporary defences for communities. EC: Sound evidence for appropriate policies on resilience and take-up of measures. Clear policies for use of temporary defences in appropriate situations.
12. Horizon scanning and long term policy needs	Defra FM Policy and SPD TAG	B: SPD research programme largely focussed on current policy concerns. EC: Programme that appropriately balances work on current concerns with investigations relevant to the next decade and beyond.

Links with other programmes
Modelling and Risk (MAR) theme Sustainable and Asset Management (SAM) theme Incident Management and Community engagement (IMC) theme Making Space for Water Implementation Programme

Others with any interest in this R&D only	Comment
<u>Defra links</u> Environment DG Science Group Marine science Liaison Group Policy areas: Water Marine Global Atmosphere Soils Agricultural practice EPE Social policy Unit <u>External R&D linkages</u> Office of Science and Technology Research Councils NERC, EPSRC, SSRC Meteorological Office (MO) NERC (Pol and CEH) SE-ERAD (SNIFFER) ODPM Planning LGA TAG UKWIR	 Knowledge sharing forum Defra Economics expertise Social Science expertise The 2004 OST Foresight Report 'Future Flooding' provided a major horizon scanning exercise for the sector and this will be reviewed and updated as required. Defra works in collaboration with the research sectors wherever possible in developing research programmes to address problems in flood risk management. Defra has an interest in MO research and uses the MO to carry out specific FCERM research aligned with the objectives outlined above. Both organisations contribute to R&D and also play a part in monitoring activity that contributes to FCERM policy definition via FDGIA contributions.

Rationale

Risk from flooding and coastal erosion managed in a way which furthers sustainable development. The first response towards a new strategic direction for flood and coastal erosion risk management in England was set out in March 2005 (insert reference) following the Making Space for Water consultation in 2004. The aim of this Government strategy is:

'To manage the risks from flooding and coastal erosion by employing an integrated portfolio of approaches which reflect both national and local priorities, so as:

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

To secure efficient and reliable funding mechanisms that deliver the levels of investment required to achieve the vision of this strategy.'

This work falls under the Strategic Priority*:* Climate Change & Energy, the strategic outcome is: We will manage flood and coastal erosion risk so as to contribute to sustainable development, including minimizing loss of life and improving the standard of protection for at least 100,000 households [in the period 2005/6-2007/8] using efficiency savings to maintain outputs at equivalent levels to 2005-6.
Work also relates to outcomes measures and ABI SoP. Natural Resources and Protection, Emergency preparedness, PSA targets 1, 2 & 3; and the Evidence & Innovation Strategy.

Defra's role in addressing the problem is Policy leadership through close engagement with the Environment Agency as main delivery body, Coast protection authorities (through LGA), the Association of Drainage Authorities (ADA) and other Government Departments and Agencies.

Climate change and changes in socio-economic consequences of flooding are major future pressures influencing flood risk. Work carried out within the Joint Defra/ Environment Agency FCERM R&D Programme supports moves to holistic approaches to sustainable flood risk management. This move places increased emphasis on risk management strategies, coordination of approaches across different aspects of flood risk, influencing behaviour, appropriate development policies, effective planning for extremes and other policy areas.

New directions will include the development and demonstration of sustainable solutions optimising economic, environmental and social benefits. Finding ways of developing governance and funding arrangements to better engage those affected, incorporate their preferences and aspirations and provide systems for a better sharing of costs and benefits between those who create risks with those who benefit from the risk management measures and the wider tax-paying community.

In addition, there is a mature understanding of the ongoing efforts and processes needed to keep the evidence and innovation needs of flood risk management aligned with the pressures and opportunities created by the principal drivers for change of flood and coastal erosion risk, namely climate change and socio-economic pressures.

FRM can also make a major contribution to water-related biodiversity and conservation goals. There are often significant amenity and access issues at stake in implementing management measures as these are an integral part of all river and coastal management activities.

External drivers	Contextual drivers: • EU Directives (Water Framework Directive, emerging Floods Directive) • other EU Directives (Groundwater, Landfill) • Emerging UK science agenda: ▪ EPSRC Flood Risk Management Research Consortium (FRMRC) ▪ ESRC/BBSRC/NERC Rural Economy and Land Use (RELU) programme ▪ Office of Science and Technology Foresight Future Flooding programme ▪ NERC Flood Risk from Extreme Events (FREE) programme ▪ Regional Spatial Strategies, Planning Policy Guidance review e.g., PPG25 • European research projects: ▪ FLOODsite ▪ EUROSION ▪ Co-ordination of Research in Europe (CRUE)

Internal drivers	• Making Space for Water • Defra Evidence and Innovation Strategy • UK Government sustainable development strategy • Rural Strategy 2004 • England Rural Development Programme • UK Climate Change Programme