



National Audit Office

**Department for Environment, Food and Rural Affairs
and Environment Agency**

Flood Risk Management in England

Methodology

OCTOBER 2011

Methodology

1 The National Audit Office's report on Flood Risk Management in England (HC 1521) examined the progress made since 2007 in strengthening flood risk management in England. In particular it considered how well the risk of flooding is identified and how well investment is targeted at risk, and reviewed how the reforms to the flood risk planning system were being supported and overseen by the Department for Environment, Food and Rural Affairs (the Department) and the Environment Agency (the Agency).

2 The principal methods used for this study were:

- financial analysis of central funding and expenditure data;
- quantitative data analysis;
- documentary review of the Department's and the Agency's programme management information;
- visits to the Agency's Regional Offices and Regional Flood and Coastal Committee hearings;
- interviews and focus groups with local authorities;
- interviews with third party stakeholders; and
- a review by an external expert on the Agency's collation and use of flood risk science, including an assessment of its effectiveness in assessing the extent and magnitude of the risk of flooding from main rivers and the sea.

Financial analysis

3 We undertook financial analysis of central funding and expenditure data on flood risk management to examine whether public money was targeted in areas at greatest risk of flooding and whether it was spent effectively and efficiently.

4 We analysed financial data on flood risk management in the following areas:

- Central Government flood defence grant-in-aid allocations to the Agency over the previous spending review period (2007-08 (baseline year) – 2010-11) and this spending review period (2011-12 – 2014-15);
- the Agency's long-term forecast on funding required to maintain existing levels of flood protection to 2035;
- breakdown of the Agency's expenditure on flood risk management activities, 2010-11;
- the Agency's capital expenditure against budget and targets, national overview and by Agency region, 2007-08 – 2010-11 and allocations in 2011-12 and 2012-13;

- the Agency's capital expenditure committed to existing construction schemes compared with new schemes 2007-08 – 2010-11, and allocations 2011-12 – 2014-15;
- local levy for flood risk management projects raised by Regional Flood and Coastal Committees, 2007-08 – 2010-11 and allocation in 2011-12;
- external funding contributions raised by the Agency to support capital investment, 2008-09 – 2010-11 and forecasts 2011-12 – 2013-14;
- the Agency's revenue expenditure on different risk categories of flood defence systems, national overview and by Agency region, 2007-08 – 2010-11 and forecast expenditure 2011-12 – 2014-15;
- revenue support grant allocations for local authority flood risk management activities, 2010-11 and 2011-12;
- central funding to support new local authority responsibilities for flood risk management, 2011-12 and 2012-13.

Quantitative data analysis

5 We reviewed the Department and the Agency's performance management information on flood risk management from 2008-09 to 2010-11 to assess how the Agency was performing against its targets set by the Department as well as against its own corporate objectives.

6 We analysed quantitative performance data from the following sources:

- The Agency's database that scores projects eligible for capital funding and ranks them for funding approval against the following outcomes expected:
 - the ratio of the whole life present value benefits to the whole life present value costs;
 - number of households in flood risk categories;
 - hectares of nationally important wildlife sites and biodiversity action plans protected;
- the Agency's quarterly performance reports to the Department on its progress in meeting the spending review targets;
- performance data on Agency's capital projects detailing actual completion of projects compared to target dates, and outturn against budget;
- performance data on Agency's flood defence features detailing absolute and relative proportions of features above and below target condition, by region and national overview, 2007-08 to 2011-12; and
- the Agency's reported flood risk management programme efficiencies, 2008-09 to 2010-11.

7 We also reviewed the outturn data from the Agency's National Flood Risk Assessment, which estimates the number of properties in England at various degrees of flood risk, by region and nationally, 2007-08 to 2009-10.

Documentary review of Agency and Departmental information

8 We reviewed relevant Agency and Departmental documents. This information included:

- The National Flood and Coastal Erosion Risk Management Strategy 2011;
- The Agency's Corporate Strategy, 2010-2015 and Corporate Plan, 2011-2015;
- The Agency's Long Term Investment Strategy for Flood Risk Management, 2009;
- The Department and the Agency's strategic risk and financial risk registers;
- Department and Major Project Authority Reviews of the Agency's flood risk management programme;
- Quarterly papers to Agency's Senior Management Board including finance reports, 2008-09 to 2010-11;
- Quarterly Programme Management Board papers for each Agency region, 2008-09 to 2010-11;
- Sample of Regional Flood and Coastal Committee board papers, 2010-11;
- The Agency's internal audit reports on its flood risk management programme;
- The Agency's monitoring reports on its Catchment Flood Management and Shoreline Management Plans;
- The Agency's Business Cases for its Creating Asset Management Capacity project and its project to improve its National Flood Risk Assessment;
- The Agency's Skills Strategy;
- The Agency's Flood Defence Asset Management Plan 2010-2015;
- The Agency's Flood Defence Asset Maintenance Standards, 2010;
- Sample of the Agency's System Asset Management Plans;
- Sample of the Agency's capital project documentation including appraisal guidance.

9 As part of this review, we conducted semi-structured interviews with key Agency and Departmental staff to inform our understanding of the robustness of programme management arrangements and the quality of data.

Visits to the Agency's Regional Offices

10 Between May 2011 and June 2011, we undertook two day-long visits to each of the Agency's six regional offices. Detailed discussions and semi-structured interviews were held with senior leadership teams, finance directors, programme management teams, flood risk managers, and area managers. In each region, we interviewed about 30 staff.

11 We observed three Regional Flood and Coastal Committee meetings and had semi structured interviews with the Chairs of the Committees.

12 The objectives of these visits were:

- to obtain detailed qualitative data on the progress made on implementing the recommendations of our previous report in 2007;
- to obtain information on:
 - engagement with local partners;
 - resource management (financial and staff);
 - programme management;
 - maintenance of flood defences; and
 - governance.

13 The regions we visited were:

- Anglian, Peterborough.
- Midlands, Solihull.
- North West, Warrington.
- Southern, Reading.
- South West, Exeter.
- Yorkshire and North East, Newcastle upon Tyne and Leeds.

Interviews and focus groups with Local Authorities

14 We held focus groups with local authorities in each region. Each focus group undertook a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis on the reforms of the delivery and funding model. A total of 50 participants took part, comprising representatives of lead local flood authorities and district council representatives.

15 We analysed the evidence from a survey conducted by the Local Government Group in 2010 on the capacity and capability of the local authorities to fulfil their new responsibilities.

Interviews with third parties

16 We undertook semi-structured interviews with, and reviewed position papers of, the following key stakeholders. We sought their views on both the Agency's management of flood risk from rivers and the sea and also the new delivery and funding reforms underway:

- Association of Drainage Authorities;
- Association of British Insurers;
- British Property Federation;
- County Land and Business Association;
- Institution of Civil Engineers;
- National Farmers Union;
- National Flood Forum;
- Ofwat.

Assessing the technical capability of the Agency's systems

17 We appointed an independent academic expert, Professor Paul Bates, Director of the Cabot Institute at the University of Bristol to advise on the extent to which the science (national flood risk data, modelling and mapping) is being used to effectively inform and prioritise funding and programme management decisions both nationally and locally.