



Department
for Environment
Food & Rural Affairs

www.defra.gov.uk

Flood and Coastal Erosion Risk Management Evidence Plan

**Policy portfolio: Water and Flood Risk
Management**

**Policy area within portfolio: Flood Risk
Management**

Timeframe covered by Evidence Plan: 2013/14-2017/18

Date of Evidence Plan: March 2013

This evidence plan was correct at the time of publication (March 2013). However, Defra is currently undertaking a review of its policy priorities and in some areas the policy, and therefore evidence needs, will continue to develop and may change quite rapidly. If you have any queries about the evidence priorities covered in this plan, please contact StrategicEvidence@defra.gsi.gov.uk.

© Crown copyright 2013

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/ or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk

PB13915

Contents

1. Policy context.....	1
Key policy outcomes for the policy programme.....	2
2. Current and near-term evidence objectives	4
Evidence needs to support policy outcomes	4
3. Future evidence needs	8
4. Meeting evidence needs	9
Management of the FM Evidence Programme.....	10
Identifying evidence needs.....	10
Working with others.....	11
5. Evaluating value for money and impact	12
Programme review	13

1. Policy context

What are the key policy outcomes for the policy programme/area?

Flood and coastal erosion risk present a very real threat. In England, 5.2 million properties are at risk of flooding. Of these, 1.4 million are at risk from rivers or the sea alone, 2.8 million are at risk from surface water alone and 1 million are at risk from both. There are also an estimated 200 homes at risk of complete loss to coastal erosion in the next 20 years. It is possible 2,000 more could become at risk over this period. In Wales, a total of 357,000 properties are at risk from flooding, 220,000 from rivers and the sea, and a further 137,000 from surface water alone. The numbers of properties at risk from coastal erosion in Wales is significantly smaller than England, and the majority of those at risk would not be affected until the medium- to long-term (i.e. 30 – 100 years). Changes in our climate, such as more severe storms and wetter summers and winters, along with socio-economic changes (such as increased urbanisation) mean these risks are set to increase over time.

The widespread and serious flooding in England during summer 2007, and more recently during 2012, shows how devastating flooding can be to communities and the economy. Following the 2007 floods, Sir Michael Pitt conducted an independent review of the way the events were managed. The *Pitt Review: Lessons learned from the 2007 floods*¹ was published in June 2008 and contained 92 recommendations covering diverse aspects such as prediction and warning of flooding, prevention, emergency management, resilience and recovery.

The Flood and Water Management Act 2010² implements many of the recommendations made in the Pitt Review and provides for better, more comprehensive management of flood risk for people, homes and businesses. The Act required the production of National Flood and Coastal Erosion Risk Management Strategies. Separate strategies were published for both England³ and Wales⁴ in 2011, setting out a framework to help communities, the public sector and other organisations to work together to manage coastal erosion risk.

Looking forward beyond implementation of the Flood and Water Management Act 2010, policy priorities are to evaluate the success of the Act and the partnership approach to funding, as well as further enhance our support to communities to be able to plan for and respond to flood risk. We need to better integrate our approach to flood risk with other

¹ http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/pittreview/the_pittreview/final_report.html

² <http://www.legislation.gov.uk/ukpga/2010/29/contents>

³ <http://www.official-documents.gov.uk/document/other/9780108510366/9780108510366.pdf>

⁴ <http://wales.gov.uk/docs/desh/publications/111114floodingstrategyen.pdf>

policy priorities, notably surrounding the environment, and we need to continue to monitor and assess our approach to emergencies, developing the approach as appropriate.

Key policy outcomes for the policy programme

In England, Defra has a national policy responsibility for managing flood and coastal erosion risks. Our programme contributes to the UK Government's priority to *Support a strong and sustainable green economy, including thriving local communities, resilient to climate change*, and specifically the evidence to support the Ministerial priority to *improve our resilience in the face of flooding and coastal change risks*.⁵

The Welsh Government has made a commitment to ensure Wales has *healthy people living productive lives in a more prosperous and innovative economy; that we have safer and more cohesive communities, with lower levels of poverty and greater equality; that our environment is resilient, with more sustainable use of our natural resources and that Welsh society has a vital sense of its own culture and heritage*.⁶ Managing the risks of flooding and coastal erosion across Wales is integral to delivering on those commitments.

Flood and coastal erosion risk management (FCERM) must also be undertaken in a manner that meets the requirements of environmental legislation (e.g. Water Framework Directive, Habitats Directive, England Biodiversity Strategy & Eel Regulations). EU Member States are required to take appropriate steps to co-ordinate the application of the Floods Directive (FD) and the Water Framework Directive (WFD). As such FCERM schemes and activities should be designed to help conserve, enhance and restore the environment for both people and wildlife.

In England, our key policy outcomes are currently as set out below. These are being reviewed – early indications of changes of emphasis are highlighted where relevant:

Policy outcome 1: Flood and coastal erosion risk management investment delivered efficiently and in line with government policy through a funding process approach which secures value for taxpayer's money whilst giving more choice and responsibility to local communities.

The Government has made a commitment to provide improved levels of protection to 145,000 households by March 2015 through Grant in Aid funding for FCERM schemes. The Environment Agency has committed to achieve 15% efficiencies in procurement over the period. In May 2011, Defra introduced the Partnership Funding approach in order to leverage wider funds to deliver more flood and coastal defence projects than government is able to fund alone. Government funding contributions are based on the numbers of households protected, the damages

⁵ <http://www.number10.gov.uk/wp-content/uploads/2012/05/DEFRA-2012-Business-Plan.pdf>

⁶ <http://wales.gov.uk/docs/strategies/110929fullen.pdf>

being prevented and other benefits that a project would deliver. Going forward, there will be a need to evaluate early performance of Partnership Funding, in particular the impacts it is having on communities at flood risk.

Policy outcome 2: Those at risk of flood have access to affordable insurance which reflects measures taken to reduce the risk.

The current agreement between government and the insurance industry, the *Statement of Principles*, obliges insurance companies to offer flood cover as part of standard insurance policies in most cases (though does not guarantee cover for some high-risk properties and does not constrain the price of insurance). There can therefore be a large disparity between the premium a household has historically paid and the expected annual damages from flooding. The agreement is due to end in summer 2013. Defra is working with the insurance industry to develop a successor arrangement which ensures that insurance for homes at risk of flooding remains affordable, without placing unsustainable costs on wider policy holders and the taxpayer.

Policy outcome 3: Flood and coastal erosion risk to communities reduced through better governance, evidence and partnerships; and prevent unnecessary building in areas of high flood risk under our role in the planning system.

The Flood and Water Management Act received Royal Assent in April 2010 and provides for better, more comprehensive management of flood risk for people, homes and businesses, helps safeguard community groups from unaffordable rises in surface water drainage charges and protects water supplies to the consumer. The Act is being implemented by a series of Ministerial Orders and through the introduction of secondary legislation. The Act gives local authorities a new role to manage local flood risk in their area. Going forward, we will need to evaluate the effectiveness of measures introduced by the Act and consider the ongoing role for government in supporting local communities.

Policy outcome 4: Government prepared to respond to flood and coastal risk emergencies.

Defra is the lead government department for flood emergencies in England, be that flooding from rivers, sea, groundwater, surface water or dam failure. Defra ministers have an overall responsibility for national-level flood emergency planning and for ensuring co-ordinated policy and other support, as necessary, to local emergency responders. Defra is reviewing the impacts of events in 2012 and their management to further enhance emergency response as appropriate.

The Welsh Government has similar policy aspirations to those in England which are espoused in four overarching objectives for managing flood and coastal erosion risk in Wales;

- **reducing the consequences** for individuals, communities, businesses and the environment from flooding and coastal erosion;
- **raising awareness of and engaging people in the response** to flood and coastal erosion risk;
- **providing an effective and sustained response** to flood and coastal erosion events; and
- **prioritising investment** in the most at risk communities.

Our evidence programme provides the underpinning evidence to support these commitments. The programme is operated jointly by Defra and the Environment Agency to support policy development and implementation in both England and Wales.

2. Current and near-term evidence objectives

What are the current and near-term objectives for evidence and how do they align to policy outcomes?

The Defra FCERM evidence programme forms part of the Joint Defra/EA Flood and Coastal Erosion Risk Management R&D programme⁷. This programme provides evidence to support flood risk management policy makers and practitioners in England and Wales and aims to:

- address the needs of all flood and coastal defence authorities;
- ensure that we deliver FCERM measures in a technically and environmentally sound and cost-effective way; and
- bridge the gap between basic research and the practical use of science.

The programme is split into four themes which are closely aligned to the operational and policy responsibilities of Defra and the Environment Agency (see section 4). Defra manages the **Strategy and Policy Development Theme** in support of our Ministerial priority and associated policy outcomes.

Evidence needs to support policy outcomes

Across the flood management policy team there are a number of over-arching evidence needs that cut across all that we do.

⁷ <http://evidence.environment-agency.gov.uk/FCERM/cy/Default/HomeAndLeisure/Floods/WhatWereDoing/IntoTheFuture/ScienceProgramme/ResearchAndDevelopment/FCRM.aspx>

- The economic, social and environmental impacts and benefits of FCERM policy will be considered across the whole programme. This includes; assessing the contribution flood risk management policy makes to economic growth and how value for money can be increased; understanding how interventions at national/market, community and household level can help reduce vulnerability and improve resilience to flooding in society overall; understanding how communities and individuals can be incentivised to take more responsibility for flood risk; and understanding the complex interaction between the effects of flooding and the impacts of flood management on the environment.
- We will undertake rigorous evaluation of FCERM policy that is supported by multi-disciplinary working involving economic, social and environmental science disciplines.
- We will consider the long-term outlook for risk and risk management to ensure that unmanageable risks are not displaced to the future.
- We will maximise the value of existing evidence, and better influence the research priorities of other funders. Through stronger engagement with Research Councils and others we can achieve greater impact for public resources. We will continue to work with the Living with Environmental Change (LWEC) programme (see section 4) as one way of achieving this.
- We need to deliver our policy outcomes in a more integrated way with other Defra policy teams, and across wider government to ensure we identify the tensions between different policies and deliver multiple benefits, such as additional environmental benefits.

Specific evidence objectives to support policy outcomes are summarised below.

Policy outcome 1: Flood and coastal erosion risk management investment delivered efficiently and in line with government policy through a funding process approach which secures value for taxpayer’s money whilst giving more choice and responsibility to local communities.

Many of our evidence requirements for this policy priority are aimed at understanding how benefits can be measured and accounted for. This includes taking into account social impacts and benefits and how these are distributed between groups in society, as well as improving measures of social vulnerability to flooding. Evidence is also required to understand the role that individual local community investment can make in the reduction of flood and coastal erosion risk, and how best to support and encourage individuals and local communities to take ownership of the management of flood risk and improve their resilience to flooding. Evidence requirements include:

- **FCERM links to the wider economy:** Understanding the links between FCERM investment and wider economic impacts such as employment, regeneration, property markets, economic output and growth to support investment decisions. (High priority.)

- **Partnership funding:** Evaluating the partnership funding approach and understanding how we can encourage greater leverage, including understanding the capacity of local third sector, community groups and private sector to access information, and develop funding and decision approaches in order to contribute. (High priority – England only – Wales does not use the same investment approach.)
- **Understanding benefits:** Further work to account for the full benefits of FCERM schemes and activities to facilitate integration of flood management with other policy areas including biodiversity, ecosystem services, climate change adaptation, water quality etc. This includes understanding social impacts and the distribution of these between groups in society. (High priority.)
- **Individual and community capacity to take ownership of and manage flood risk:** Understanding the motivations and barriers for individual and community-led action to manage flood risk and increase resilience at all levels of the flood management cycle. (High priority.)
- **Surface water flooding:** Continue working with others to better understand surface water flooding to deliver policy-relevant solutions. (High priority.)
- **Understanding the relationship between maintenance activity and capital investment:** Examining the interaction between changes in revenue maintenance activity and capital investment needs, and vice versa, in order to inform strategic spending choices. (High priority – to be developed in conjunction with the Sustainable Asset Management theme.)
- **Property level protection:** Understanding barriers and opportunities to improve uptake, mainstream installation to appropriate quality standards and facilitate effective use at an individual/household and community level. (Medium priority.)

Policy outcome 2: Those at risk of flooding have access to affordable insurance which reflects measures taken to reduce the risk.

Much work is currently underway to develop a new agreement between government and the insurance industry to ensure that insurance for homes at risk of flooding remains affordable without placing unsustainable costs on wider policy holders and the taxpayer. Whilst this area of policy is rapidly evolving, there remain evidence needs surrounding the contribution individual/community action can make to affordable insurance, as well as monitoring and evaluating how any new arrangements impact on the market and different groups in society. We envisage needs for:

- **Monitoring of new insurance arrangements:** Existing baseline data needs to be reviewed and enhanced to inform the future monitoring strategy and, in time, allow robust evaluation. Likely needs will include data on current insurance pricing, availability, size and competitiveness of the market, etc. (High priority in short term for baseline data.)

Policy outcome 3: Flood and coastal erosion risk to communities reduced through better governance, evidence and partnerships; and prevent unnecessary building in areas of high flood risk under our role in the planning system.

Our evidence needs in this area centre around ensuring local authorities have the tools and capability to discharge their functions and to monitor the effectiveness of the new legislation. We will continue to look for opportunities where government enables the community to take sustainable actions. Other requirements centre around understanding options to manage coastal erosion risks:

- **Evaluation of local flood risk management legislative requirements:** the Flood and Water Management Act 2010 introduced a number of new responsibilities and requirements – where appropriate, we need to evaluate their effectiveness and how value for money is being delivered by local authorities. In addition we need to understand the impact of delivery arrangements on different groups in society. (High priority.)
- **Sustainable drainage systems (SuDS):** gather evidence to inform SuDS policy including further work on the costs and benefits to different groups (individuals, local authorities and developers). (Medium priority.)
- **The Coastal Pathfinder Scheme** has enabled a number of communities to develop innovative solutions to the risks they face from coastal erosion. Elements of this scheme (notably development projects such as ‘rollback’) require further evaluation and we will continue to seek evidence to inform developing coastal policy.

Policy outcome 4: Government prepared to respond to flood and coastal risk emergencies.

Defra is the lead government department for all flood emergencies in England, and we require evidence to support our emergency response capability as well as central government risk assessment. We gather evidence through traditional research as well as through conducting emergency exercises. Our evidence needs include:

- **Reservoir safety:** gain a better understanding of risks associated with building and maintenance of reservoirs to enable a risk-based approach to be taken to regulation. (High priority.)
- **Emergency planning:** Understanding potential impacts of specific flooding events, such as an east coast tidal surge, to enable appropriate responses to be designed. (High priority.)
- **Emergency response:** understanding how to mount co-ordinated voluntary responses to flood emergencies. (Medium priority.)

3. Future evidence needs

What are the longer-term evidence needs for the policy area/ programme?

Many current and near-term evidence needs will still be issues in the longer term. For example, policy developments on new insurance arrangements will require evaluation and assessment. Our understanding of surface water flooding is still less well advanced than other sources of flooding, and work will continue to be required to understand the sources and pathways of surface water flooding to assess risk in both rural and urban areas. Evidence will continue to be required to inform policy development on managing coastal erosion risks as climate change increases those risks over time. Planning for flood emergencies will also continue to be a key priority for the programme.

A number of other challenges will also emerge in the medium to long term:

- In a time of continuing economic constraint, we need to ensure that the evidence base for FCERM expenditure is as robust and comprehensive as possible with all costs and benefits identified, and analysed to enable expenditure to be prioritised and justified in a fully transparent way. We need to understand how our policies can contribute to economic growth in a sustainable way that does not leave a high-risk legacy for the future. (High priority.)
- The complex relationship between fluvial, surface water, ground water and sewer flooding hampers our ability to fully assess flood risk. Advanced modelling to understand the interactions between these forms of flooding is required to better assess risk. (High priority.)
- We need to continue to build evidence about the role that government, communities and individuals can play to improve the social responses (preparation, response and recovery) to flooding. It is important to understand what action government can take to improve the capacity of individuals and communities at all these levels to manage their flood and coastal erosion risk. This includes understanding sociological, psychological and financial barriers to local action and behaviour change, and learning lessons about how these can be overcome. Evaluation of the Community Resilience Pathfinders launched by Defra in November 2012 to fund community responses to increase flood resilience will contribute to this evidence. (High priority.)
- The UK Climate Change Risk Assessment⁸ highlights the serious risks currently faced from flooding and coastal erosion, as well as the potential increase in those risks as a result of both climate change and socio-economic shifts. These changes will impact on agriculture, roads, railways, power stations, hospitals and other infrastructure and a better understanding of direct and indirect consequences will be

⁸ <http://www.defra.gov.uk/environment/climate/government/risk-assessment/>

required to inform decisions in the medium to long term. Flood management infrastructure will increasingly need to be resilient to climate change, be less carbon intensive and more socially acceptable. Future changes in climate, and societal pressures, may also raise new issues of social injustice related to flooding. Therefore, ongoing research to better understand social vulnerability and support fairness and social equality in flood policy is essential. (Medium priority.)

- The impacts of climate change might also manifest through changes to seasonal weather patterns. For example, in early 2012 the UK was experiencing drought conditions and flooding simultaneously. Future work will investigate the risk and probability of such situations occurring and how they can be managed effectively together. (Medium priority.)
- Future demographic change will present challenges to the effective management of flood risk. Not only is our population ageing, there are trends towards transient economic migration and reduced home ownership (increased landlord letting). Changing land use and increasing urbanisation will also affect flooding. We need to understand the impacts of these changes on our ability to manage flood risk effectively. (Medium priority.)
- Flood risk must be managed with regard to its impact on the environment, not least to meet legislative requirements such as the Water Framework Directive and Habitats Directive. Research will be required to better enable risk management authorities to meet the requirements of environmental legislation and work with natural processes to reduce flood risk as part of a wider multi-objective approach to land and water management. (Medium priority.)

We will continue to work with other partners, for example through the LWEC Flooding Research Strategy initiative (see section 4 'Working with others'), to identify future emerging evidence needs.

4. Meeting evidence needs

What approach(es) will be taken to meeting evidence needs?

The Water and Flood Risk Management **Analysis and Evidence Team** delivers in-house analysis and advice, and commission's research on behalf of the Flood Risk Management and Water Availability and Quality policy teams. The team includes natural scientists, economists and a social researcher and has access to statistical and operational research expertise from other Defra teams. Flood risk management evidence activities rely on a number of other disciplines to operate effectively, including engineers and environmental scientists, specialisms which are represented and available within the FM policy team.

The Analysis and Evidence Team was formally established in September 2012. Economic and social research expertise is being brought into evidence planning and assessment to ensure these disciplines are considered appropriately and that rigorous methods are

applied to ensure truly multi-disciplinary projects. Where appropriate, expert groups such as the Policy Evaluation Board and Social Research Expert panel will be used to provide support and peer review.

Management of the FM Evidence Programme

The FM evidence programme is run jointly with the Environment Agency and managed through four 'themes'. Three themes are led by the EA, reflecting their more operational focus on delivery of policy through revised processes, tools or guidance. The Defra-led theme conducts research in areas of strategic national interest and areas of developing policy.

EA-led themes:

- Modelling and Risk (MAR);
- Sustainable Asset Management (SAM); and
- Incident Management and Community Engagement (IMC)

Defra-led theme:

- Strategy and Policy Development (SPD)

Each theme is led by a **Theme Manager** who carries out day-to-day management of the theme, and who is supported by a **Theme Champion** who provides specialist support and understanding of customers' requirements for evidence; both these roles are therefore drawn from the relevant business areas in Defra and EA. **Theme Advisory Groups** provide external, independent advice on the shape of the research carried out in each theme, highlighting emerging R&D priorities and providing an horizon scanning function. They are comprised of independent experts, academics, business users etc, appropriate to each theme. The SPD theme TAG has not met for a considerable time due to resource pressures within the team. It will be re-established in 2013 to provide external input into the SPD theme.

The current Joint Programme structure and focus was established following an independent review in 2005. Since then, both the policy and delivery landscapes have changed considerably and continue to develop. We will undertake a review of the programme in 2013, to identify where the strategy and delivery of the programme can be improved. For example, where engineering and economic themes within the programme have reached relative maturity, less emphasis has been placed on the value that can be achieved through considering social research issues at all stages of the policy cycle, from framing the issue through to implementation and evaluation. There is therefore an opportunity to embed social research further in all themes of the Joint Programme.

Identifying evidence needs

We work closely with policy teams throughout the year to understand their evidence needs. Research 'ideas' are developed into robust project plans which identify *inter alia*;

- the problem to be solved;
- the planned business impact of the work;
- drivers for the work; and
- beneficiaries of the work.

We have developed a set of prioritisation criteria to be used across the Joint Programme, which rank work to be done in terms of benefits, likelihood of outcomes being achieved, strength of drivers and risks of not doing the work. Final agreement of priorities is taken by the **Joint Programme Board**, comprising senior level sponsors of the programme (from both Defra and the Environment Agency) to ensure the programme is aligned to the strategic and policy needs of both organisations.

The Theme Managers from all four themes meet four times per year to promote links between the themes, ensure cross-theme synergies are identified and are delivered, and maintain awareness of the wider evidence landscape. In addition, the Defra and EA Programme Managers are members of the LWEC Flooding Research Strategy Steering Group (see 'Working with others' below) another mechanism to maintain an awareness of the evidence base generated elsewhere.

Much of the work that we do under the SPD theme is primary research – for example, evaluating the success of measures, developing case studies or toolkits – which we seek to deliver either through commissioning research, or by working with other partners (such as EA) to deliver the evidence. In a number of areas we are seeking to understand the current state of evidence in order to assess policy options, or use evidence generated elsewhere to answer flood risk management issues. We will therefore commission a number of secondary analyses, using the existing evidence base, to be taken forward internally or externally as appropriate. We are investigating the use of systematic methods to review evidence using principles outlined in the Rapid Evidence Assessment Toolkit.⁹

Working with others

Flood risk management impacts on a number of other policy areas within Defra (for example; Climate Change Adaptation, Water Availability and Quality, Biodiversity, Sustainable Land and Soils). We will consult these areas on our evidence priorities to ensure a joined up approach and reduce the risk of duplication.

The Joint Programme has traditionally worked with a large number of collaborators to deliver and enhance the programme. Collaborations have been developed with Research Councils, for example through providing funding and input in to the Flood Risk Management Research Consortium (FRMRC) and its successor programme FRMRC2. There have been a number of EU-led programmes which the Joint Programme has taken an active lead in, for example the CRUE ERANET, working on flood resilience and

⁹ <http://www.civilservice.gov.uk/networks/gsr/resources-and-guidance>

resistance and development of a database of flooding research to identify gaps and potential areas of mutual interest. Collaborations have also been undertaken with industry groups and foreign government departments.

Both Defra and EA were active participants in the development of the **LWEC Flooding Research Strategy**¹⁰ which aims to improve the effectiveness of flood and coastal erosion risk management research through improved coordination between the numerous organisations currently carrying out research in the area. The strategy identifies priority research topics under 3 broad themes: Understanding Risk, Managing Probability and Managing Consequences of flooding. It also highlights some of the delivery challenges ahead.

A steering group to oversee implementation of the LWEC strategy has been established and consists of the main flooding research funding organisations, including Defra and EA. It is developing a framework to facilitate collaboration on future research projects and strengthen the exchange of knowledge between researchers and practitioners. We will continue to influence the development of this framework and look forward to working more closely with our LWEC partners.

5. Evaluating value for money and impact

What approach(es) will be taken to maximise and evaluate value for money and impact from evidence?

The main aim of the Strategy and Policy Development Theme of the Joint Programme is to provide timely evidence to support policy decisions for FCERM. Benefits of the evidence programme can also be to reduce gaps in knowledge or identify new gaps where these support policy commitments.

Policy input at the first stages of proposal development ensures that benefits, beneficiaries and routes to uptake are identified and built into the project scope. This ensures knowledge transfer and uptake is considered at the outset.

Members of the Flood Management policy team act as project officers for each project, ensuring policy ownership of the project direction and outputs, and a clear route to outputs being utilised. Project steering groups comprising policy customers, evidence specialists, and external experts, are established to guide the development of the projects. The steering group provides external and expert scrutiny of the project outputs prior to publication, and outputs can be further reviewed by policy teams and colleagues in the Environment Agency. Project outputs that are tools or guidance undergo trial and evaluation before being published. Independent peer review is undertaken on an *ad hoc*

¹⁰ <http://www.lwec.org.uk/activities/uk-first-flood-research-strategy>

basis, generally where results are controversial or high profile and we require additional assurance prior to publication.

We publish all of our research outputs, both on the Defra website¹¹ as well as the Joint Programme website¹². Research outputs are provided as in-depth technical reports and also summarised in accessible and easy-to-read articles which are published in a biannual newsletter for the benefit of wider stakeholders. Joint Programme achievements are reviewed annually and published. These publications are valued by our wide range of stakeholders which include practitioners, local authorities, community groups and individuals. However, we recognise that we need to place greater emphasis on ensuring we maximise the benefits from the research we commission across the whole programme. We will therefore introduce measures to ensure that anticipated benefits that can be monitored following project completion are identified prior to work commencing. We will also monitor how outputs from research have impacted policy. We will continue to carry out peer review where appropriate, but will investigate where other, commensurate, quality assurance procedures can be applied. We will address these issues as we review the Joint Programme in 2013 (see below).

We will continue to work with other policy teams in Defra to ensure our evidence activities are aligned to benefit delivery of our Departmental objectives. We will also continue to work with external partners, through the Joint Programme and through the wider research-funding community, especially through the LWEC Flooding Research Strategy, to maximise opportunities for partnership working. This will help us to increase value for money and deliver multiple benefits from the work that we undertake (for example, through increased knowledge exchange opportunities, improved coordination and joining-up of activities and leverage of external funding). We will also continue to consider how we can meet our evidence needs through increased use of secondary evidence.

Programme review

The Joint Programme was last reviewed in 2005. Given the evolution of policy priorities and evidence needs over recent years, including as set out in this Evidence Plan for the SPD theme, we will undertake a review of the programme, how it is structured, how it has delivered to date and how it can influence other research programmes to ensure that we are focussing on the right research areas. This review will take place in 2013.

¹¹ <http://randd.defra.gov.uk/>

¹² <http://evidence.environment-agency.gov.uk/FCERM/cy/Default/HomeAndLeisure/Floods/WhatWereDoing/IntoTheFuture/ScienceProgramme/ResearchAndDevelopment/FCRM.aspx>.