



**ENVIRONMENT  
AGENCY**

# **ENVIRONMENT AGENCY**

## **STRATEGY FOR FLOOD RISK MANAGEMENT (2003/4 - 2007/8)**

**Version 1.2**

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## Foreword

One of the main goals of the Environment Agency, through its Flood Defence Committees, is to reduce flood risk. We spend over £300 million a year on flood defence. We have achieved an enormous amount over recent years. Since 2000, 70km of defences have been built, reducing flood risk to over 25,000 people. Some 80 new flood defence schemes have been approved in the last two years.

There is, of course, much more to do. We have a major programme of work to deliver over the coming years. And inappropriate development decisions and the impacts of climate change mean that the risk of flooding is here to stay.

However, even with all the investment we put in, it will never be technically, economically or environmentally acceptable to prevent flooding entirely. We therefore have to reassess the way we live and cope with the ever present threat of floods. We have to change our thinking from *defending* to *managing* floods. This will mean reducing the likelihood of flooding and the impact of floods when they occur. This will mean that our future strategy centres on flood risk management.

We can reduce the physical risk to people who live or work in flood prone areas. But there can still be serious social and emotional costs from flooding. We need to understand people's concerns and get the right messages to them. We also need to help them prepare for future floods by involving them closely in devising the right solutions for their communities. Only by working together and by being prepared for flooding can we reduce the risk to people, property and the environment.

Our new five-year Strategy for Flood Risk Management sets out how we will work with our executive committees to manage and reduce flood risk. It shows how we will use the increased Government funding in areas of greatest need, to deliver a first class flood risk management service to the public and meet Government and Agency targets. We will do this in ways that help to deliver additional benefits in areas such as sustainable development, biodiversity, and urban and rural regeneration.

Sir John Harman  
Chairman

## Executive Summary

This Strategy sets out what the Environment Agency and its Flood Defence Committees will do to deliver the Government's policy aim of reducing flood risk over the next five years (2003/04 – 2007/08). The Strategy takes an integrated approach to minimising the risk from flooding to life, property and the environment, exploiting the benefits of natural flooding for biodiversity, and accommodating the impacts of climate change.

The purpose of the Strategy is to ensure that flood risk management is integrated within our business and that we deliver Government policy and the targets within our Corporate Strategy 'Making it Happen' (MiH).

In the first three years we intend to:

- Have no loss of life through flooding.
- Reduce the risk of flooding to life, major infrastructure, environmental assets and some 80,000 homes.

Our key targets for 2007, working with Defra, the Welsh Assembly and others, are to:

- Ensure that 75% of residents in flood risk areas will take effective action.
- Improve the coverage of flood warning services to 77% of properties in flood risk areas.
- Achieve a reduction in the proportion of properties within the floodplain exposed to a 'high risk' of flooding.
- Produce Catchment Flood Management Plans for all principal catchments in England and Wales
- Prevent all inappropriate development inside floodplains.

We will also:

- Ensure that in urban areas 70% flood defence systems are in good condition or better by 2008, and no more than 3% are in poor condition or worse.
- Meet Biodiversity Action Plan targets for all species and habitats for which we have the lead, and to contribute to Government targets to bring 95% of all Sites of Special Scientific Interest in England into favourable condition by 2010.

Flood risk management activities can reduce the *probability* of flooding through the management of land, river systems and flood defences, and reduce the *impact* of floods through effective land use planning, regulation, flood warning and emergency response. Flood risk cannot be eliminated, only reduced.

The six priorities for change emerging from our flood risk management strategy are:

1. We will adopt a **strategic approach to flood risk management** where we will target and prioritise our investment and resources at those areas where flood risk can most effectively be reduced. This will mean moving from flood 'defence' to flood 'risk reduction'. This approach will require greater collaboration with stakeholders. Catchment Flood Management Plans and Shoreline Management Plans need to be developed to assess flood risk on a larger scale and examine the pressure on flooding, whether from development or climate change.
2. Whilst we can minimise flood risk through our activities, controls are needed to prevent development that could increase flood risk. We will **prevent inappropriate development** by working to influence planning policy and decisions.
3. A new approach to the way we **manage our asset infrastructure** is required, which considers the whole life cycle of the flood defence system from cradle to grave and secures the greatest performance and return on investment from those assets.
4. The impact of floods will be reduced through closer integration and streamlining of our activities in **managing floods**, including flood planning, flood forecasting and warning, event

management, response, flood event recording and reporting, after-care and recovery. Targets to increase the coverage, accuracy and reliability of flood warnings will deliver an extended and improved service to those at risk.

5. **Effective communications** will support the development and delivery of our flood risk management policies and services. We will develop a communications programme to support the full range of flood risk management services and activities. This will enhance our flood awareness campaign to ensure we influence Government, industry, our partner organisations and the public on all aspects of flood risk management, not just flood warning.
6. We need to improve our **business efficiency and effectiveness** by developing smarter solutions to managing our workload and resource pressure. Each year we are forced to make hard choices about the work we do, the standards to which we operate, and the pace at which we deliver our work programmes. We will establish a programme of efficiency improvements supported by good quality data and management information; this will help us identify when and where resources need to be re-directed to support changing priorities. This will be helped by improved technology, by new resource planning and by developing people to ensure delivery.

Our Strategy for Flood Risk Management will be delivered by a programme management approach. The programme will enable us to match our workload to the resources available (both people and funding) by careful prioritisation and targeting of investment to projects that will deliver MiH and Government targets. Delivery will be improved through the implementation of the Government's recent Funding Review.

## 1. Aims and Objectives

### 1.1 Our Vision for Flood Risk Management

Our vision for flood risk management is that:

- flood risk will be reduced year on year across England and Wales to an agreed level and investment will be sufficient to maintain that level even with the pressures of climate change
- flood risk will be understood, known and acted on by those who live, work, play, travel and invest in areas at risk from flooding
- flood risk management activities will be supported by the public, stakeholders and politicians and enhance the quality of life, the environment and sustainable development
- the Environment Agency will be respected and acknowledged worldwide for its leading role in flood risk management.

### 1.2 Aims

The aim of this Strategy is to deliver real improvements on the ground using the outcome of the Government's Funding Review to get better, more coherent and effective set of funding and administrative arrangements in place. We will focus our resources on minimising the risk to life, property and the environment, while exploiting the benefits of natural flooding for biodiversity, in an integrated way that will accommodate the impacts of climate change.

In the first three years we intend to:

- have no loss of life through flooding
- reduce the risk of flooding to life, major infrastructure, environmental assets and some 80,000 homes

Our key targets for 2007, working with Defra, the Welsh Assembly and others, are to:

- ensure that 75% of residents in flood risk areas will take effective action
- improve the coverage of flood warning services to 77% of properties in flood risk areas
- achieve a reduction in the proportion of properties within the floodplain exposed to a 'high risk' of flooding
- produce Catchment Flood Management Plans for all principal catchments in England and Wales
- prevent all inappropriate development inside floodplains
- ensure that in urban areas 70% flood defence systems are in good condition or better by 2008, and no more than 3% are in poor condition or worse
- to meet Biodiversity Action Plan targets for all species and habitats for which we have the lead, and to contribute to Government targets to bring 95% of all Sites of Special Scientific Interest in England into favourable condition by 2010.

### 1.3 Objectives

The objectives of this Strategy are to:

- focus Flood Risk Management activities to deliver the environmental outcomes within MiH and our Environmental Vision

- deliver the Service Delivery Agreement targets for the Government's Spending Review 2002
- deliver efficiencies through business process development
- improve our effectiveness in communicating and influencing
- increase the availability and accuracy of information on flood risk
- change the way we think about flooding from flood 'defence' to 'risk management'

The business drivers for these objectives include MiH and Government policies.

## 1.4 Principles of the Strategy

This Strategy will deliver against these principles:

- (i) Focus on efficient delivery. The resources will not be available to do everything, so we need to accept that we will stop some things, and be more efficient. We must deliver the core projects and services, and use all the available funding each year to manage the risks, and deliver the outcomes in MiH. We must make use of the best science, engineering and technology available.
- (ii) Simplicity and transparency. Understanding and managing flood risk is a complex area. We want to promote greater understanding of flooding and what can and cannot be done to prevent and mitigate the effects of floods, so our messages need to be kept simple and our decisions transparent.
- (iii) Accountability. We will be clear on the accountabilities for delivering our flood risk management activities and communicate these accountabilities to our stakeholders. With some funding for flood risk management being levied locally from taxpayers, we will seek local input.
- (iv) Consistency. We will work to consistent business processes, supported by effective information systems. The national targets will be applied to regions to start the move towards consistent service levels across England and Wales. Block grant will support this principle from 2004/05, although variations in local funding, workload and concerns will still exist. The targets do not preclude other local priorities from being addressed, but there will be a greater focus on risk-based approaches and maximising environmental benefit.
- (v) Added value. We will work with regional bodies, seeking external funding and exploring local partnerships that can realise a range of benefits, such as recreation or regeneration, from our work programmes.
- (vi) Integrated coastal and river basin management. We rely on many partners to deliver flood risk management with a consistent and integrated approach. We will build on these relationships to jointly manage activities within the coastal zones and river catchments including the impacts of the Water Framework Directive
- (vii) Delivery of multiple benefits. Our work will, where possible, deliver a wide range of environmental and social benefits, particularly for biodiversity and urban regeneration.

## **2. Flood Risk Management in the Agency**

### **2.1 Introduction**

Flood risk is a combination of two components: the chance (or *probability*) of a particular flood event and the impact (or *consequence*) that the event would cause if it occurred. Flood risk management can reduce the probability of occurrence through the management of land, river systems and flood defences, and reduce the impact through influencing development in flood risk areas, flood warning and emergency response.

### **2.2 Regulation**

Regulating and influencing development is essential in the battle against increasing flood risk. Whilst we can minimise flood risk through our activities, controls are needed to prevent development that could increase flood risk. Enforcement of the land drainage byelaws is essential to prevent development reducing the effectiveness of the flood defence systems and increasing the risk of flooding.

Our regulatory powers for flood risk management are limited to providing information and advice to planning authorities, which they may or may not take into consideration. With the high demand for housing, and the pressure for more development in England and Wales, there is intense pressure on us to provide high quality advice to the planning authorities and developers. The availability, accuracy and accessibility of our data and information on flood risk often influences the effectiveness of our advice.

Planning Policy Guidance Note 25 (PPG 25) has had a mixed impact on the approach to development and flood risk in England. We will seek to influence the review of PPG25 in 2004. The Welsh Assembly will soon publish their guidance on development and flood risk in the form of the Technical Advice Note 15 (TAN15) for Wales.

### **2.3 Flood Warning**

Flood Warning comprises several processes including monitoring weather, river and coastal conditions, forecasting river and sea levels, disseminating flood warnings, and influencing those at risk to take effective action to prepare for and respond to flood warnings. We provide a 24-hour Floodline telephone advice and information line.

People who live and work in areas at risk from flooding can benefit from accurate, reliable and timely flood warnings. They can take action to protect life and reduce damage to their property.

Our management of flooding incidents has improved since the Easter 1998 floods. As an organisation, we learned a great deal from such a widespread event, having never experienced one of such magnitude. A major change programme, prompted by the independent review of the floods, implemented new structures, new flood warning codes and new incident management procedures. These improvements were displayed in our management of the Autumn 2000 floods, which was praised by Government.

Flooding needs to be taken seriously by all organisations. Flood response plans, such as Major Incident Plans and Local Incident Plans, must be prepared, published and tested through joint exercises.

## 2.4 Strategic Planning

Flood risk management requires high quality data for decision-making, particularly where long-term decisions are being made. Data must be readily available on the probability and impact of floods in order to assess and manage flood risk. We are working with Defra to develop a method for risk assessment for flood defence systems. Our flood mapping is essential to define areas where flooding has or could occur and support the whole range of flood risk management activities.

Collaboration is important for flood risk management. Whilst current legislation (The Water Resources Act 1991) gives us a supervisory duty that enables us to oversee matters relating to flooding we need to improve our collaboration with the other operating authorities to make the most effective use of our resources. Flood risk can be reduced more effectively through collaboration with other authorities, land managers and the financial services industry. Our programme of Catchment Flood Management Plans (CFMPs) for the whole of England and Wales will promote greater collaboration with stakeholders to jointly develop sustainable flood management policies for the next 50 years. The impact of the Water Framework Directive (WFD) will be reflected in these plans.

The first generation of Shoreline Management Plans (SMPs) are being reviewed by Coastal Groups to consider sustainable management options for the coastline. Coastal Habitat Management Plans (ChaMPs) for internationally designated sites will support the development of policies for coastal flood management and defence that comply with the Habitats Directive.

## 2.5 Flood Defence Operations

Flood defence assets and their management are extremely important. The asset base is made up of some 24,000km of defences, which includes embankments and walls, and 49,000 structures such as weirs, sluices, pumping stations, trash screens, and the many kilometres of river channels. The replacement value of our flood defence asset base is more than £15 billion, with only £100m (0.7% of asset value) spent on maintaining and operating the assets. The operation and maintenance of this major asset infrastructure is key to the minimisation of damage from flooding and this level of expenditure is believed to be inadequate.

The public has little understanding of what flood defences are and how they are managed. There is confusion over our permissive powers, the distinction between main-river and ordinary watercourse and the responsibilities of the various 700 operating authorities.

## 2.6 Flood Defence Improvements

Each year we spend about £150m on improving flood defences through our capital construction programme; some 200 schemes are constructed that protect approximately 20,000 properties, either by replacing existing defences, or providing new ones. The Environment Agency's National Capital Programme Management Service manages the grant aided capital construction projects.

### 3. Our Strategy for Flood Risk Management

Our flood risk management activities must focus on the delivery of our environmental outcomes and the targets set by Government. These outcomes and targets are summarised in appendix A.

#### 3.1 A Strategic Approach to Delivery

The Environment Agency's approach to flood risk management has given priority to the provision of defences to properties that were prone to frequent flooding. It will never be cost effective, technically feasible or environmentally acceptable to defend all properties at risk of flooding. So we need to target and prioritise our investment and resources at those areas where we can most effectively reduce flood risk. In doing so, we will consider the probability of flooding and the consequences. To achieve a net reduction in flood risk, it may be necessary to increase the probability of flooding in some locations where the impacts are beneficial to the environment but don't impact adversely on people.

The current Shoreline Management Plans (SMPs) have taken a strategic approach to coastal flooding and protection, and these principles need to be developed and extended to consider all flood risks arising within coastal cells and river catchments.

Future flood risk management schemes will need to reduce the risk of flooding to people and their property, sustain and improve the environment and support economic development. Schemes will maximise the opportunities from improved land management, change of land use, the flood defence infrastructure, as well as from flood warning, portable or demountable defences, flood proofing of properties, and new defences where economically sound, environmentally beneficial and technically possible.

Planning to reduce flood risk will require greater collaboration and partnerships with local planning authorities, landowners, local communities and other groups, to understand current and future flood risk. Single, integrated strategic plans for flood risk management must then be developed for catchments and coastal cells to explore and define common goals. These plans will support an integrated approach to land use planning and management, and assist with implementing the WFD, the agri-environmental review and other environmental plans.

A major element, in the integrated approach described above, will be Catchment Flood Management Plans (CFMPs), which will enable us to:

- (a) understand current and future flood risk from all sources within the catchment, and quantify the risks
- (b) plan for the likely impacts of climate change on flood risk
- (c) consider opportunities for reducing flood risk through changes in land use or more sustainable land management practices, and evaluate how benefits could be derived from new agri-environment measures
- (d) help prevent inappropriate development in flood risk areas
- (e) involve regional government and other government bodies to raise awareness of the effects of land use, land management practices and climate change on flood risk
- (f) contribute to and support the implementation of the WFD by providing vital information on flood risk for river basin management plans (CFMPs will fit wholly into the WFD river basins)
- (g) influence the massive development pressures, particularly in the south east of England, and the reviews of RPG9, the new Regional Spatial Strategies and the creation of new sustainable communities

- (h) influence OFWAT on the implications of sewer and surface water flooding and the need to take action through AMP4 to reduce the risk of flooding from these sources.

The change in approach from flood defence to flood risk management requires a change in culture and mindset, not only in the Environment Agency but also in society. As sustainable flood risk reduction solutions involving changes to land use are implemented on a catchment-wide basis we will need the science to educate and inform communities on their effectiveness and to reassure them that the measures will provide the desired reductions in risk compared to traditional hard local defences.

**Our priority areas:**

- By 2005, we will have a method to assess and quantify flood risk across England and Wales, and inform decision-making, that enables us to demonstrate a long-term trend of risk reduction
- We will continue to support, as active members of Coastal Groups, the review of Shoreline Management Plans (SMPs) to develop policies for managing coastal flood risk that are integrated with local planning policies and biodiversity objectives
- We will develop in England, in conjunction with English Nature, Coastal Habitat Management Plans (CHaMPs) to provide information on internationally designated sites in the coastal zone for SMPs (ChaMPs are not currently planned in Wales)
- By 2008, we will have delivered our programme of Catchment Flood Management Plans (CFMPs) for all principal catchments and determined policies for managing flood risk within each catchment
- By 2005, we will have developed a Modelling Strategy to ensure consistency, co-ordination and multiple use of model development and operation. Decision support systems will increase the effectiveness of our business decisions, both in terms of exploring flood risk management solutions and in balancing funding between our activities
- We will work with Defra/Welsh Assembly to streamline the planning process to enable faster delivery of a wider range of integrated flood risk management solutions for frequent and extreme flood events, by clarifying the relationships between CFMPs and Strategy Plans
- We will advise Defra/Welsh Assembly during the development of the Government's policy guidance and information on planning for climate change for use by regional and local planners on flood and coastal defence, and on other environmental aspects
- In 2003, we will publish and start implementing our Flood Mapping Strategy to promote a greater understanding of flood risk and to provide more comprehensive information on areas at risk from flooding. We will replace the Indicative Floodplain Map on the Internet with a new Flood Map in 2004
- By 2004, we will have developed and started implementing a Data Management Strategy to ensure we have the processes in place to manage and improve our data
- We will participate in the Government's Foresight initiative to produce a long-term vision for the future of flood and coastal defence in the UK. This vision – which will address the 30 to 100 year time span – is intended to inform policy and its delivery, and will identify the key future drivers of flood risk and the impacts of flooding. We will influence future responses to long-term flood risk and policy development.

### 3.2 Preventing Inappropriate Development

Our regulatory powers need strengthening. Whilst we are a statutory consultee for structure plans, environmental assessment and development, the latter does not specifically include developments in flood risk areas. We need to be a statutory consultee on flood risk, to raise its profile and ensure that local planning authorities (LPAs) consult us and take our advice in the planning process.

We need to communicate with developers and landowners to ensure they understand and adhere to flood-related legislation. Enforcement action will send clear messages on the importance of the land drainage consenting process to maintain the integrity of the flood defence infrastructure and systems.

#### **Our priority areas:**

- We will seek a review of regulatory legislation such that we become a statutory consultee on flood risk by 2005
- We will encourage the Government to instruct LPAs to report on compliance with PPG25 and our advice, to monitor the implementation and effectiveness of PPG25 (as well as the revised TAN15 when published). We will seek to influence the review of PPG25 in 2004
- We will improve the quality and timing of our advice to Local Authorities to influence planning decisions for the important development proposals by adopting a risk based approach to planning consultations in 2003. We will provide standing advice for consultations outside of high flood risk areas for the majority of planning applications to focus our resources on those developments that really matter. Our advice will be supported by clear national policies for regulatory activities.

### 3.3 Asset Management of Flood Defence Systems

Flood defence systems (the asset infrastructure) reduce the risk from flooding and prevent about £2.7 billion of damage from flooding every year<sup>18</sup>. The management (operation, maintenance, replacement, extension and regulation) of this asset base is essential.

We need a new approach to the way we manage our assets that considers the whole life cycle of the flood defence systems using a cradle to grave approach to secure the greatest return on investment. Maintenance, renewal and replacement will be considered with a view to optimising the performance and effectiveness of the assets. Our business-critical assets will be identified and protected from breakdown, whilst others are worked hard. Maintenance regimes in the future will be able to rely on accurate data on the condition and performance of these assets.

The integrity of the flood defence infrastructure and systems needs to be maintained through regulation of development, as well as extended and improved to provide more benefits to people, property and the environment. Our management of the flood defence infrastructure will support the implementation of the flood risk management policies and measures arising from CFMPs and SMPs.

#### **Our priority areas:**

- By 2004, we will have developed an Asset Management Strategy for performance-based whole life cycle management of our flood defence infrastructure, including

Critical Ordinary Watercourses and associated assets which takes an integrated approach to managing the assets and supports the delivery of SR2002

- Through the implementation of the funding review, we will streamline the approvals and funding processes for asset management (both capital and revenue) to facilitate faster delivery, and implement the block grant proposals by 2005
- We will improve the planning, inspection and targeting of investment on infrastructure according to flood risk using a prioritisation system to ensure that 50% of flood defences and structures in urban areas will be in good condition or better by 2005. All investment in the infrastructure will be recorded on a national asset management system by 2008
- We will seek information on third party assets, and influence asset owners to ensure that these assets are managed and maintained appropriately. We will take action if they do not comply
- We will implement Water Level Management Plans to improve local management of sites and wetland habitats so that they achieve satisfactory conservation quality
- By 2007, we will have developed and implemented integrated Asset Management Plans for key flood defence systems
- We will continue to deliver a full programme of capital construction projects through our National Capital Programme Management Service (NCPMS)
- We will pursue with Defra/Welsh Assembly the development of a multi-criteria appraisal of projects and, with planning policy and guidance and insurance providers, the need to ensure greater consistency in standards of protection for communities at risk
- We will support the implementation of the Habitats Directive, ensuring that, in managing our flood defence infrastructure, we comply with the Habitats Regulations. We will also incorporate actions required under the UK Biodiversity Action Plan and the Biodiversity Strategy for England within flood risk management schemes to deliver integrated solutions with multiple benefits. We will work with English Nature to identify opportunities
- National policies and processes for funding and using temporary and demountable defences will be developed by 2005
- By 2005, we will have reviewed investment programmes to identify opportunities to support regeneration projects and our objectives of sustainable construction and environmental gain
- By 2006, we will have implemented best practice procurement (including with other operating authorities) to achieve efficiencies and best value for money, ensuring the effective use of all funding for maintaining, operating and improving our asset infrastructure.
- We will work with developers to secure effective management of surface water within the flood defence system to reduce flooding from these sources and encourage the use of sustainable drainage systems as part of the asset infrastructure to protect and enhance the environment.

### 3.4 Managing Floods

Flood defences do not prevent all floods. A key element of flood risk management is the ability to plan for and manage flooding to reduce the risk to life and minimise the impact from floods. The seven key elements to **managing floods** are:

- (i) Flood planning
- (ii) Flood detection and forecasting
- (iii) Flood monitoring and warning
- (iv) Flood event management
- (v) Response (us and others)
- (vi) Flood event recording and reporting
- (vii) Flood after-care and recovery.

These activities need to be streamlined, integrated and co-ordinated to ensure efficient delivery.

We must involve our professional partners and communities to develop sound emergency plans and consistent policies covering all services to be offered before, during and after an event. These plans need to be tested through exercises to ensure the effective deployment of people and greater co-ordination of activities during and after the flood.

Our Flood Warning Investment Strategy (2003-2013) will provide the basis for delivering an integrated programme of flood detection, forecasting, warning and response. It focuses on work to improve coverage of flood warning services and influencing those at risk to take effective action.

The importance of flood response is increasing with the added threat from extreme events resulting from climate change, and from the greater application of temporary/demountable defences and local flood protection products. More investment in technology is needed to support flood forecasting, warning and response, as well as recording and reporting on flooding to measure the effectiveness of warnings and defences. We need to speed up the evaluation and reporting of how we manage flood events to learn the lessons and make improvements.

Our project to review and further improve Incident Management is considering how we manage all incidents, including flood incidents, and the role of our Emergency Workforce (EWF) during flooding.

#### **Our priority areas:**

- By 2006 we will have a nationally consistent approach to flood forecasting to improve forecast quality and allow extension of the service to meet our coverage target
- By 2006 we will have a nationally consistent approach to flood warning decision-making with systems in place to ensure that relevant information can be assimilated effectively and used to support clear, accountable warning decisions
- By 2005 a nationally consistent approach to flood warning dissemination and information systems will be in operation. Flood warning codes will be applied to consistently identified flood warning areas, based on risk. A new multi-media warning dissemination system will be launched in September 2004
- By 2007, we will have completed our planned programme of improvements to flood forecasting and flood warning service to provide a more effective warning service to at least 77% of properties in flood risk areas, and enable 75% of residents in flood risk areas to take effective action

- We will develop, through our Incident Management Review Project, a new Strategy for Incident Management, and review the role of our EWF, by September 2003. We will improve our current services by implementing consistent incident management policies and processes for England and Wales; by 2004 we will have determined the future role and shape of the EWF
- By 2007, improved systems will be in place to support the management of flood events, covering flood planning, event management (including information and communication management during the event), flood data collection and reporting, response (by us, using the EWF as a national resource, and others). Call handling and communications during an event will improve using new systems in a flood information centre that can handle enquiries relating to flooding from any source
- By 2006, we will have developed and implemented a national policy for flood after care (e.g. local advice surgeries & working with local authorities to support recovery)
- By 2008, improved emergency plans will be in place, and all organisations involved in incident management will have clearly defined roles and responsibilities that have been communicated and tested through local, regional and national exercises. Appropriate levels of service will be in place through Major Incident Plans.
- We will be better able to support the emergency services' Control Centres with skilled and trained resources by 2008 to provide information to them during floods
- The new Civil Contingencies Bill proposals, if passed, will be implemented by 2006.
- Minimum standards for recording flood event information will be in place by 2006, and processes will be simplified and standardised to enable faster reporting.

### 3.5 Effective Communications

Effective communications are critical to developing and delivering our flood risk management policies and services. Since September 2000, our Public Awareness Campaign has focused on the need for awareness of flood risk with messages such as "Floods: We can't prevent it. You can prepare for it". The change from defence to risk reduction has already started.

We need to broaden and enhance our flood marketing and communications to provide clear messages on how to reduce the risks of flooding, not relying on just flood warning and response. Our communications need to influence Government, industry, our partnering organisations and the public on the need for this new approach.

Our communications must be clear, consistent and channelled. We must understand the needs of our stakeholders, professional partners and customers and allocate resources accordingly. Good communication needs time and resources. We will ensure that we deliver clear, consistent messages using relevant communication channels to all groups. We will encourage feedback to fuel improvements.

#### **Our priority areas:**

- By 2004 we will have developed a communications plan and programme to support all flood risk management services and activities.
- We will deliver an enhanced flood awareness campaign to increase awareness of flood risk and all risk management activities.

- By 2004 we will have analysed our stakeholders, professional partners and customers to understand their needs to enable us to allocate resources to manage our relationships with key groups; we will have implemented an account management approach to help us do this.

### 3.6 Business Efficiency and Improvement

Pressures on funding and resources mean that we need to develop smarter solutions to managing our workload. Each year our Regional and Local Flood Defence Committees are forced to make hard choices about the work they do, the standards to which they operate, and the pace at which they delivers their work programmes. We need to improve our resource and business planning activities to support flood risk management decision-making, and to identify when and where resources need to be re-directed to support changing priorities.

We will support a prioritised R&D programme in collaboration with Defra / Welsh Assembly Government and other organisations such as the European Community, Research Councils and UKWIR to make the best use of science, engineering and technology. This will deliver benefits through enhanced performance, reduced costs, and new knowledge, tools and techniques.

We will make the best use of information technology. Common national systems, supporting business processes, will enable us to mobilise resources across regional boundaries. Systems will be developed with re-usable elements wherever possible and will actively support the execution of business activities, with the capture of data being a by-product of such support. All technology developments supporting the delivery of this Strategy will be aligned with the IS/IT Strategy. We will need to invest more in technology to support the assessment of flood risk and the full range of risk management activities.

#### **Our priority areas:**

- To develop a programme to offset the pressures from variable funding, new duties, pay increases and escalating workloads. A mechanism for identifying and tracking resources that are freed up by such programmes is essential to realising these efficiencies. We will introduce efficiencies across the business:
  - ⇒ Our Head Office team will be re-shaped by summer 2003/04 to provide a clearer distinction between policy and process, and to bring the expertise within the national centres back into the heart of the functional units.
  - ⇒ During 2003/04 region and area structures will be reviewed to support the implementation of this strategy and the Government's funding review.
  - ⇒ Science management and research and development activity will become a more mainstream part of flood risk management.
- During 2003/04 we will start the implementation of the Government's funding review announcement by planning the introduction of the arrangements for block grants (capital only in Wales), extending our permissive powers to critical ordinary watercourses and planning the introduction of single tier committees.
- By 2004 we will have established the organisational arrangements necessary for us to perform the new duty of enforcing the Reservoirs Act in England and Wales (subject to the Water Bill becoming law) and thereafter we will ensure that flood plans exist for all reservoirs covered by the existing Act

- By 2004/05 we will have changed our approach to business planning by adopting the Priority Planning method of allocating resources to deliver a consistent service for flood risk management across England and Wales, and to reduce overheads.
- By 2005 we will have reviewed how we evaluate projects to ensure they are aligned and synchronised with our Strategy for Flood Risk Management.
- To continue to prioritise the health, safety and welfare of our staff, we have implemented policies on health and safety management, and are undertaking a public safety audit to assess the requirements for more safety measure to protect our staff and visitors from hazards at all sites.
- By 2004 we will have developed a Technology Solution Strategy for flood risk management to ensure that supporting technology does not exist in isolation and is not delivered piecemeal. By 2008 an accompanying IS/IT programme will ensure that all our major business processes for flood risk management are underpinned by cost-effective IT infrastructures and systems.
- Work with Defra, to develop the National Flood and Coastal Defence Database (NFCDD) for use by our staff, and to make it available to other operating authorities to improve the exchange of information and reporting on High Level Targets.

## 4. Implementation and Delivery

### 4.1 Developing People

Following the work of both the Institution of Civil Engineers 'Learning to Live with Rivers' and the more recent analysis of market capacity, it is clear that there is a shortage of resources and expertise. We need expertise to deliver this Strategy so we are producing a Capacity Plan.

Our staff are under tremendous pressure with an ever-increasing workload. Every flood event generates extra work. These pressures are compounded by difficulties in recruiting and retaining staff.

Our challenge is to realise the full potential of our staff whilst managing the workload and associated stresses and strains. We will develop people within the organisation through increasing skills and competencies. And we will increase flexibility within the workforce and enable the organisation to benefit from innovative tools and methods of working. Improvements in the organisational culture, work environment and working practices will help us recruit and retain staff.

To achieve this, the Agency has developed a Human Resources Strategy. It addresses three main areas:

- (a) Increasing the availability of people through effective workforce planning leading to timely and appropriate recruitment and retention; improving attendance (fewer accidents, less sickness absence); sound succession management and career development.
- (b) Improving the capability of people through their effective management and performance review, providing appropriate and timely training, development and learning opportunities.
- (c) Building enthusiasm to contribute fully through management and leadership; organisation development and internal communication; valuing diversity; having the best possible HR policies and excellent employee relations.

Action is already being taken to broaden our source of potential employees, and significant work has already been done to build technical competence through professional development; a number of our training and development programmes are now accredited by ICE and CIWEM.

As a major client, we have a stake in not only the development of our own staff, but also the development of our suppliers' staff and the wider profession; our future approach to procurement should support long term skills development in the industry as a whole.

Our Capacity Plan will enable us to deliver a high level programme of work over the next five years, taking account of the skills and resources available to us. We will then put in place an action plan that secures the supply of people, offers a good working environment, provides excellent training and development, and attractive and realistic career opportunities.

We will also continue to support initiatives that raise the profile of the industry and encourage more people to choose a career in flood risk management.

### 4.2 Key Partnerships

We recognise that working with key partners is essential to the success of this Strategy. We will adopt an account management approach to ensure that we are professional and effective in the way we work with all our partners.

We need to make more use of external specialist services and advice, with our core flood risk management expertise focused on business analysis, flood risk assessment, management decision-making and project management. Current annual expenditure on external resources is more than £150m. We will seek to achieve best value and not simply lowest cost through our approaches to procurement.

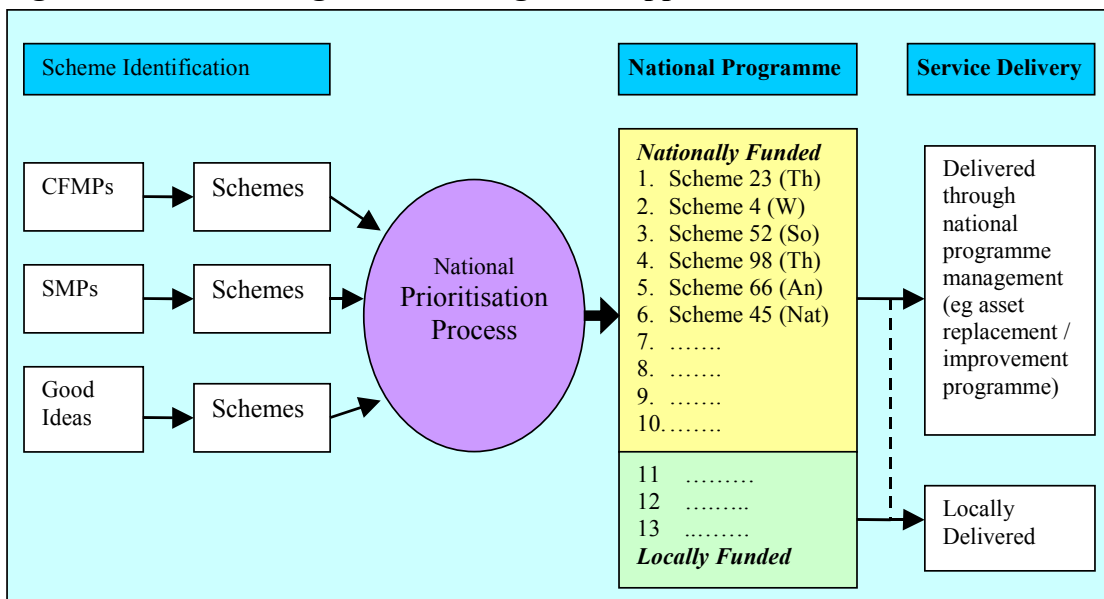
### 4.3 Shaping an Effective Delivery Programme

To deliver MiH and SR2002, we need sound programme management, particularly for the cross-functional elements of our work. We will produce a high-level delivery programme which will:

- provide an overview of our activities to enable the setting of national priorities
- develop a programme approach across all Flood Risk Management activities
- develop and implement a change control process
- encourage commitment and discipline into the work that we do.

The Programme Management approach will be implemented between 2003 and 2005. We will then have a delivery programme that enables us to balance investment at a high level between our operational activities, and determine a prioritised list of schemes. The highest priority schemes will be funded by national grant aid in England and by levies in Wales. Schemes that are not nationally funded could be funded locally through levies at the discretion of Flood Defence Committees. The new programme management approach will be phased so that we have a national prioritised programme for all schemes by 2007/8, as illustrated in figure 3. We need block grant to deliver this element of the Strategy.

**Figure 3: National Programme Management Approach**



Scheme identification will change over the life span of this Strategy to be driven by a strategic approach rather than a specific problem by problem approach based on what we think is required. The good ideas that arise from identifying local problems must be supported by CFMPs or SMPs as being in the best interests of reducing risk when considered on a catchment, or coastal cell, scale.

The benefits of this approach are not only the co-ordination across the function, but also the reduced time for project approvals and more certainty of funding and support from the whole business. This approach will enable wider considerations to balance the level of investment for activities right across the business from operational work to process development and business support such as IT and finance.

By having a clearly documented overview of the function's direction and programme for delivery, we will be able to manage impacts on our work (such as flood events or change in Government policy) and fine-tune business direction in response to change. We will stop work that does not align with MiH and SR2002 targets.

#### **4.4 Project Prioritisation**

The Programme will be supported by a consistent prioritisation process across England and Wales that measures projects against delivering the SR2002 targets and our corporate strategy, and that has regard for resources, risk, rate of return, simplicity, speed of implementation and local issues. We will balance the resources and funding, prioritising allocation to areas of the business that need it most to reduce flood risk. We will prioritise with care and will have to make hard choices as we have more to do than our resources allow.

Through the programme management structure and project prioritisation we will be able to provide clear guidance to our executive committees on our national priorities and the funding needs.

A 'gateway' process will ensure that new activities are assessed before any commitment is made for delivery with a current or following financial year. Resources will be assigned to maximise environmental benefit.

#### **4.5 Strategy Implementation Programme**

An initial high level programme of actions has been developed to ensure that the Strategy can easily be translated delivery; it consists of a series of actions relating to what we will do. How we will implement these actions may require further consideration within a detailed action plan.

The costs to deliver this programme cannot be determined until decisions have been made as to how the actions will be delivered. We need to work within the resources available to us now, and be in a position to feed into future Government spending reviews beyond SR2002 with detailed and resourced work programmes.

#### **4.6 Governance – Decision-Making Framework**

A Programme Management approach will be adopted to ensure clear accountabilities for national projects. Programme Boards will be established for each of the principal areas of activity. The Board will provide an overview of project/programme delivery and it will be accountable for ensuring that the project benefits are realised.

## 4.7 Operational Policy Development

The programme management approach will rely on a strong lead from the Head Office policy development teams. These teams, to be created from the review of the Head Office structure, will be responsible for leading operational policy development for flood risk management, in line with overall Government policy.

Our Policy teams will focus efforts on:

- developing operational policy that supports legislation and directives on flood risk management
- working with Defra and the NAW to determine policy matters and communicate policy issues and decisions
- specifying the work required by process staff by determining what needs to be delivered by when
- developing sound science and providing high quality technical advice, supported by our Science Strategy
- working with stakeholders on specific policy areas
- ensuring Process Managers are properly informed about policy issues
- developing strategic plans within functional units
- working cross-functionally
- developing policy on new duties
- leading on risk-based management and embedding associated policies
- determining efficiencies and areas for improving productivity and acting on them.

## 4.8 Business Process Development

To ensure the consistent implementation of this Strategy, we will develop our business processes; this will help us achieve efficiency savings.

Process teams will channel effort to:

- determine how we will work operationally within and across each of the Water Management functions
- translate policy statements into operational objectives, guidance and activities, to ensure we are efficient and focused in our work
- determine work standards, levels of service and links to Priority Planning activity
- ensure we have the right information and high quality data on efficient business systems, such as through the introduction of NFCDD
- determine resource requirements, linked to Business Planning activity
- provide expert advice to operational staff on the guidance and operational procedures to be followed
- monitor, evaluate and update AMS guidance
- develop process guidance on new duties with policy staff
- plan and lead on audit activities to ensure processes are being followed to an acceptable standard
- ensure the right skills and disciplines are within Area and Regional teams by making available suitable technical training.

## 4.9 An External Benchmark

We will provide measures and targets for our own performance in all areas of our business activities. To determine our success in these areas, we will benchmark ourselves against similar organisations undertaking similar activities, building on best practice and making improvements where appropriate.

## 4.10 Success Criteria

The success of this Strategy needs to be monitored against our objectives for flood risk management through the Corporate Performance Management Project.

Over the next three years we intend to:

- have no loss of life through flooding
- reduce the risk of flooding to life, major infrastructure, environmental assets and some 80,000 homes

Our key targets for 2007, working with Defra and others, are to:

- ensure that 75% of residents in flood risk areas will take effective action
- improve the coverage of flood warning services to 77% of properties in flood risk areas
- achieve a reduction in the proportion of properties within the floodplain exposed to a 'high risk' of flooding
- produce Catchment Flood Management Plans for all principal catchments in England and Wales
- prevent all inappropriate development inside floodplains
- ensure that in urban areas 70% flood defence systems are in good condition or better by 2008, and no more than 3% are in poor condition or worse
- to meet Biodiversity Action Plan targets for all species and habitats for which we have the lead, and to contribute to Government targets to bring 95% of all Sites of Special Scientific Interest in England into favourable condition by 2010

### **What will be different once this Strategy has been delivered?**

- The Environment Agency and its Flood Defence Committees will be responsible for Flood Risk Management, not Flood Defence, and the Agency's organisational structure will support this new thinking. We will be widely known for our skills in managing and reducing flood risk
- MiH and Government targets will have been delivered whilst securing multiple benefits from flood risk management schemes
- We will have a consistent methodology for assessing flood risk, and use it on a national, regional and catchment/management unit scale
- Our investments will be based on a strategic approach to risk reduction and allocated according to a prioritisation process for England and Wales, and supported by our executive committees and other partners. Delivery will consist of schemes consisting of a mix of risk reduction measures, possibly including new defences, re-alignment or removal of existing defences, improved flood forecasting and warning, improved multi-agency and individual response

- Future targets will be outcome-based on risk reduction and social and environmental improvement
- Flood risks arising from land use and climate change will be recognised, understood and fully taken into account in flood risk management schemes and planning decisions
- There will be no inappropriate development in the floodplain
- Prioritised national programmes will be in place in England and Wales for future work, with national and local delivery
- Consistent business processes will be well established and delivered across England and Wales through closely aligned systems
- People who may be affected by an impending flood will receive timely, reliable and accurate flood warnings and take action to reduce damage on behalf of the community
- We will deliver integrated flood planning, forecasting, warning, response, recording and reporting every time nature challenges or overwhelms our defence systems
- The Floodline number will be well known and the service will meet customer needs
- Society will care about flood risk, and enforcement activity will be rare
- The information we provide to our customers will be relevant, timely, easy to access and available in a format to suit them. We will be recognised as the place to go for information and advice about flood risk
- We will communicate effectively on flood risk and be an influential advisor to Government and planning authorities. Regional Spatial Strategies will be influencing flood risk reductions across the country
- More lives and property will be saved from floods and after-care will be provided that ensures the swift recovery of communities and enhances our reputation and that of our partners. More communities will enjoy an appropriate standard of protection with the flood infrastructure achieving the optimum performance in reducing flood risk and securing social and environmental gains. We will achieve best value in asset management and replacement.

## 5. Resources

Currently we depend on two main sources of funding: Government grants and levies on local authorities and Internal Drainage Boards. The Spending Review 2002 announcement provided a significant increase in money for Flood and Coastal Defence. Defra funding for all operating authorities for 2003/04 was confirmed as £136m. Our share of this is £69 million (including £5m for extra statutory contributions on catchment plans, the national flood and coastal defence database etc). The current assessment of our provision from Defra in 2004-05 and 2005-06 is likely to be £80m and £110m respectively. The Welsh Assembly has also indicated grant funding with £2.5m for 2003/04 rising by £1.0m each year to £4.5 in 2005/06. The figures are illustrated in Table 2 below. Funding levels beyond 2005/06 are not yet established but we will make a case to Treasury for further funding in SR2004 to deliver the Strategy.

**Table 2: Funding Provisions for 2002/3 to 2005/6 (£m)**

Item	2002/03	2003/04	2004/05	2005/06
Defra grant, supplementary credit approvals, extra statutory contributions for all operating authorities	124	136	129	154
Proportion of above allocated to Environment Agency	70	69	80	110
Government funding to LAs for Flood Defence allocated under "Formula Spending Share to Agency"	248	263	300	340
Welsh Assembly grant	2.5	2.5	3.5	4.5
Other Income	24	24	25	25
Total Agency Funding for Flood Risk Management	344.5	358.5	408.5	479.5

Since the Autumn 2000 floods, funding has increased steadily, with a significant increase planned in 2005/06. By then, the Agency's funding for flood risk management will have increased by £135m over 2002/03 levels. Defra has advised us of our indicative grant funding levels to 2005/06 and priority score thresholds.

The funding to deliver our Strategy is critical. Through the Programme Management approach and improvements in our business planning, we will develop long term programmes of work covering all our activities, not just capital investment. This will enable us to work with Defra and the Welsh Assembly Government more effectively to secure the necessary funding to deliver our Strategy, and also seek other funding sources to meet any shortfalls. The speed of delivery of our Strategy will be tailored to fit with the available funds.

## Abbreviations

AMP	Asset Management Plan
AMS	Agency Management System (process management)
CEH	Centre for Ecology and Hydrology
CFMP	Catchment Flood Management Plan
CHaMP	Coastal Habitat Management Plan
CIS	Corporate Information Systems
CIWEM	Chartered Institution of Water and Environmental Management
COW	Critical Ordinary Watercourse
Defra	Department for Environment, Food and Rural Affairs
FMPR	Financial Management and Policy Review
HLTs	High Level Targets (for Flood and Coastal Defence)
HR	Human Resources
ICE	Institution of Civil Engineers
IS/IT	Information Systems/Information Technology
MiH	Making it Happen
ODPM	Office of the Deputy Prime Minister
OFWAT	Office of the Water Regulator
LPA	Local Planning Authority
NFCDD	National Flood and Coastal Defence Database
PPG25	Planning Policy Guidance Note 25
PPW	Planning Policy Wales
PSA	Public Service Agreement
R&D	Research and Development
SAC	Special Area for Conservation
SMP	Shoreline Management Plan
SPA	Special Protection Area
SR2002	Spending Review 2002
SSSI	Site of Special Scientific Interest
TAN15	Technical Advice Note 15
UKWIR	UK Water Industry Research
WAG	Welsh Assembly Government
WFD	Water Framework Directive

## Glossary of Terms

**Consequence** - An impact such as economic, social or environmental damage/improvement. May be expressed quantitatively (e.g. monetary value), by category (e.g. High, Medium, Low) or descriptively.

**Defence system** - Two or more defences acting to achieve common goals (e.g. maintaining flood protection to a single flood cell community).

**Probability** - A measure of the chance that an event will occur. The probability of an event is typically defined as the relative frequency of occurrence of that event, out of all possible events. Probability can be expressed as a fraction, % or a decimal. For example, the probability of obtaining a six with a shake of a fair dice is 1/6, 16% or 0.166. Probability is often expressed with reference to a time period, for example, annual exceedance probability.

**Residual risk** - The risk that remains after risk management and mitigation may include, for example, damage predicted to continue to occur during storm events of greater severity than the 100 to 1 annual chance event.

**Return period** - The expected (mean) time (usually in years) between the exceedance of a particular extreme threshold. Return period is traditionally used to express the frequency of occurrence of an event, although it is often misunderstood as being a probability of occurrence.

**Risk** - Risk is a combination of the chance of a particular event, with the impact that the event would cause if it occurred. Risk therefore has two components – the chance (or *probability*) of an event occurring and the impact (or *consequence*) associated with that event. The consequence of an event may be either desirable or undesirable. Generally, however, the flood and coastal defence community is concerned with protecting society so a *risk* is typically concerned with the likelihood of an undesirable consequence and our ability to manage or prevent it. This Strategy uses the Government's approach in PPG25 to consider risk with only the probability component.

**Risk assessment** - The process of identifying hazards and consequences, estimating the magnitude and probability of consequences and assessing the significance of the risk(s).

**Risk management** - According to context, either action taken to mitigate risk, or the complete process of risk assessment, options appraisal and risk mitigation

**Risk reduction** - The reduction of the likelihood of harm, the consequence of harm, or some combination of the two.

**Source** - Source refers to a source of hazard (for example, heavy rainfall, strong winds, surge).

**System** - In the broadest terms, a *system* may be described as the social and physical domain within which risks arise and are managed. An understanding of the way a system behaves and, in particular, the mechanisms by which it may fail, is an essential aspect of understanding risk. This is true for an organisational system like flood warning, as well as for a more physical system, such as a series of flood defences protecting a floodplain.

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## **Appendix A: Targets for Flood Risk Management**

### **A1 Making it Happen Targets**

#### **A1.1 An Enhanced Environment for Wildlife**

##### **Government's objectives for the Agency:**

- To help conserve and enhance the diversity of native wildlife
- Contribute to the PSA target that 95% of all SSSIs in England are in favourable condition by 2010

##### **Targets for 2007:**

- Where we are a significant contributor to actual or potential damage in 96 high priority Special Protection Areas and Special Areas of Conservation, remedial action will be identified by 2004. A programme of remedial work will have been implemented by 2006.
- Investigative work to identify the causes of Agency-related impacts on 167 medium priority sites will have been completed by 2006, and remedial work started on half of these sites by 2007.
- Make proportionate progress towards UK BAP targets, in particular for all species and habitats for which we have the lead.
- Ensure that 85 % of owned SSSI land is in favourable condition.

#### **A1.2 Improved and Protected Inland and Coastal Waters**

##### **Governments Targets for the Agency**

- To maximise the use of the waterways for which we are the navigation authority and to work with other navigation authorities and others to create an integrated inland waterway system.
- To promote greater recreational use of the waterways by all sectors of society and provide improved facilities for users.
- To maintain our assets in a condition which ensures the safe use of their waterways.

##### **Agency Targets for 2007**

- Deliver waterway regeneration from 20 % of major Flood Risk Management/Navigation capital projects by 2007.
- By 2007 increase the number of sites that provide public access by 7%.

#### **A1.3 Restored, Protected Land and Healthier Soils**

##### **Government's objectives for the Agency**

- Sustainable development

##### **Agency targets for 2007**

- All new development strategies of LPAs will be influenced by our input to minimise environmental impacts.
- 95% of representations on planning applications will influence planning decisions.

- We will seek to improve the sustainability of agriculture by ensuring National Rural Development Plans include specific agri-environment and other measures to protect land and natural resources, and by ensuring an environmental management system for farms is developed and introduced.
- Implement our Soil Strategy.

#### **A1.4 Limiting and Adapting to Climate Change**

##### **Government's objectives for the Agency**

- To plan for the likely impacts of climate change.

##### **Agency targets for 2007**

- Ensure plans are in place to adapt flood management systems to expected climate change.

#### **A1.5 Reducing Flood Risk**

##### **Government's objectives for the Agency**

- To reduce the risks of flooding to people and to the developed and natural environment.

##### **Agency targets for 2007**

- Ensure that 75% of residents in flood risk areas will take effective action.
- Improve the coverage of flood warning services to 77% of properties in flood risk areas.
- Achieve a reduction in the proportion of properties within the floodplain exposed to a 'high risk' of flooding.
- By 2005, for flood defence systems in urban areas, ensure 50% (by 2008, 70%) are in good condition or better, and no more than 5% (by 2008, 3%) are in poor condition or worse.
- Produce Catchment Flood Management Plans for all principal catchments in England and Wales
- Seek to influence planning activities to prevent all inappropriate development inside floodplains.

#### **A2 Public Service Agreement/Service Delivery Agreement Targets**

This Strategy also aims to support Defra in achieving the Government's Service Delivery Agreement targets. We have produced a delivery plan for the 2002 Spending review period, until March 2006.

Although there is no PSA for flood risk management, there are three Service Delivery Agreements relating to the management of flood risk for Defra:

- SDA26            To aim, by the encouragement of sustainable defence measures (including timely and effective flood warning systems) to have no loss of life through flooding.

- SDA27 By investing £397 million over the Spending Review period (2003-06), Defra will reduce the risk of flooding to life, to major infrastructure, environmental assets and to some 80,000 homes.
- SDA28 Defra will implement the conclusions of the Flood and Coastal Defence Funding Review including the development of proposals for new funding streams and initiatives to reduce the percentage of overheads involved in the provision of flood defences, to an agreed implementation plan to be developed by March 2003.

There are also Government PSAs for biodiversity and SSSIs to ensure that 95% of SSSIs are in favourable or recovering condition by 2010.

There are currently no PSA or SDA targets associated with the SR2002 funding review in Wales.

### **A3 High Level Targets for Flood & Coastal Defence**

The High Level Targets for Flood and Coastal Defence were first published by MAFF (now Defra) in November 1999. The Welsh Assembly published their High Level Targets in April 2001. The Agency will continue to deliver and report on the achievement of these targets.

## Appendix B: Business Risks and their Management

There are several risks that could undermine success. Individual projects and programmes should identify risks specific to their success and develop plans to mitigate those risks. The high-level risks are:

- ***National Priorities and Regional Funding:*** There is potential for conflict between nationally-driven priorities and consistency in approach across England and Wales, with the regional funding streams and local decision-making. The national programme managers will need to work closely with the Committees to provide guidance and data to support local decision-making and seek co-operation.
- ***Failure to Manage the Change Required:*** Delivering this strategy will require changes to organisations, roles and working relationships. It will challenge many existing practices and ways of working. Planning for and managing the scale and pace of change will require leadership, committed management, and a coherent, integrated Business Change Programme. Policy and process development must be speeded up to implement changes resulting from the funding review and the introduction of national programmes.
- ***Conflicting Requirements:*** This Strategy has to deliver change on a range of dimensions. This can result in both conflicting priorities and lack of clarity; strong leadership, clear direction and good communication will help reduce this risk.
- ***Lack of Resources:*** The corporate planning process needs to make proper provision for funding the initiatives. To mitigate the risk of resources (financial, personnel and time) being inadequate to achieve all the change projects required, resources will be allocated on a priority basis from the outset, to those initiatives that deliver the greatest contribution to our organisational objectives.
- ***External Factors:*** Events, such as the recent foot and mouth epidemic, may prevent us from carrying out preventative operational activities or implementing key change initiatives. Projects and functions need to have contingency plans for such events.
- ***Systems.*** Any delay in the delivery of IS/IT systems could delay increases in productivity.
- ***Policy and Process.*** National consistency requires rapid policy development to meet the needs of regions and areas. Sufficient resources need to be allocated to policy development under the Head Office structure review.
- ***Transition Period.*** Continuing to deliver the core business during the transition period is vital given the targets set by Government. Careful management of resources over the transition period and early adoption of the programme management approach will reduce the risk of failing to deliver.
- ***ODPM and Sustainable Communities.*** The rapid implementation demanded by the ODPM will require the rapid gearing up of our influencing role if we are to have an impact on the early major developments in the south east of England. The Head Office structure review must ensure key staff are in post early during the change process.