

## CLIMATE CHANGE ADAPTATION STRATEGY (2008-11)

### SUMMARY

*The Environment Agency is one of the leading public bodies on climate change adaptation with a key role to play in reducing vulnerability and risks from climate change and ensuring communities, businesses and individuals are resilient to future impacts (such as increased flooding, drought, and storm surges).*

*The Climate Change Adaptation Strategy (2008-11) builds on the previous strategy launched in 2005 and sets out a systematic approach for embedding climate change adaptation into the Environment Agency's core activities, providing a strategic framework for assessing climate risk, building adaptive capacity, identifying adaptation options and ensuring co-ordinated delivery. Key elements of the strategy include –*

- All policy functions to have developed an Adaptation Action Plan by April 2009*
- Development of a Climate Change Adaptation Programme by April 2010, fully integrated with the new Corporate Strategy, also due by April 2010*
- Establishment of a Climate Change Programme Board to drive and oversee delivery.*
- A rolling programme of adaptation in action case studies and projects*
- Publication of a major report in 2009 on adaptation*
- Development of an Adaptation Advocacy Plan.*

### 1. VISION

**1.1 *The Environment Agency has embedded future risk from climate change into our core business, across all functions and directorates, and is delivering environmental outcomes consistent with the best available climate science***

### 2. AIM

2.1 This strategy sets out a systematic approach for embedding climate change adaptation into the Environment Agency's core functional activities, providing a strategic framework for assessing climate risk, building adaptive capacity, identifying adaptation options and ensuring co-ordinated cross-functional delivery. It builds on the previous Organisational Adaptation Strategy (2005-08).

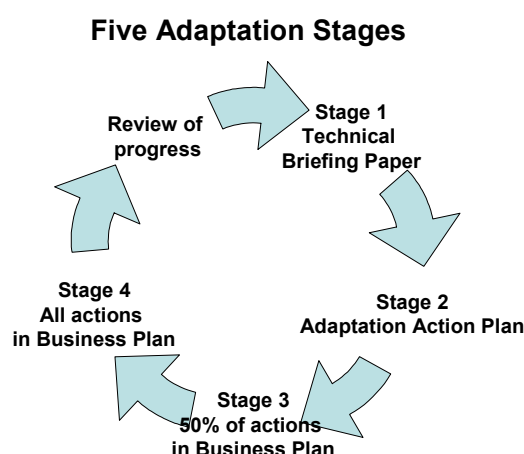
2.1 The Environment Agency is also committed to reducing greenhouse gas emissions, as both a regulator of business and industry (and as the competent authority for both the EU Emissions Trading Scheme and the UK's Carbon Reduction Commitment) and by reducing our own carbon dioxide emissions. Details of our approach to this can be found in our Internal Environmental Management (IEM) Strategy, which sets targets to cut our own CO<sub>2</sub> emission by 15% by 2010 and 30% by 2012. The Climate Change Adaptation Strategy will address mitigation issues only when adaptation options have a carbon cost.

### 3. CLIMATE IMPACTS & RISK

- 3.1 The 2007 summer floods, the 2004-06 drought and the 2003 heatwave, have shown how climatic events can have a major impact on households, businesses, critical infrastructure (such as roads, railways, water treatment works or electricity generation) and vulnerable sections of society (such as the poor or elderly), as well as having a major economic impact. Increasingly, extreme weather events are making climate change more salient.
- 3.2 The climate in the UK is projected to change significantly over the next century, with average annual temperatures in some regions rising by up to 5°C by 2080. The specific changes we are likely to see can be summarised as:
- Wetter, warmer winters
  - Hotter, drier summers
  - Rising sea levels
  - More frequent extreme events, such as heatwaves, gales, storms, tidal surges and intense rainfall
- 3.3 These changes will pose a direct risk to the Environment Agency's core business, both in terms of delivering our corporate targets as well as the service we provide to our customers and stakeholders. For example,
- Increased fluvial and coastal flooding and flooding from urban drainage systems
  - More frequent and prolonged periods of water scarcity and drought
  - Loss of protected species and changes to species and habitat distribution
  - Detrimental changes to land use patterns and land management practices
  - Increased difficulty of meeting water quality standards
  - More pollution incidents from waste sites
  - Restrictions on the navigation and recreational use of rivers
- 3.4 Addressing these risks, and adapting our core business to future climate impacts is a priority objective in the Environment Agency's Corporate Strategy, 'Creating a Better Place' and in 2005 we launched our first Organisational Adaptation Strategy (2005-08) to begin this process.

### 4. REVIEW OF PROGRESS 2005-08

- 4.1 The Organisational Adaptation Strategy (2005-08) sets out a detailed methodology, based on work by the UK Climate Impacts Programme<sup>1</sup> (UKCIP), for integrating adaptation into business planning. Key stages include the development of a Technical Briefing Paper, which collates the available research, identifies the climate risks and outlines the key issues, and the production of an Adaptation Action Plan that ultimately gets embedded into business plans.



4.2 In this first phase, it was agreed to prioritise seven functions to produce Adaptation Action Plans - Flood Risk Management, Water Resources, Conservation & Ecology (& Fisheries), Waste, Land Quality, Monitoring & Assessment and the Water Framework Directive. Six of these functions now have Action Plans which are integrated into their business plans, with Water Framework Directive deferring the production of an Action Plan in favour of 'adaptation screening' emerging River Basin Management Plans. Delivery in phase one has been monitored by a Corporate Scorecard measure (Appendix 3).

4.3 Examples of the most significant actions agreed or underway include:

- The next revision of National Flood Risk Assessment (NaFRA) will include new climate change science and use the UKCIP Scenarios (UKCIP08);
- The Flood Risk Management (FRM) Long term Investment Strategy will factor in climate change scenarios
- Revised climate change allowances in Flood Risk Appraisal guidance, incorporating regional variations
- Water company resource plans will have a climate change impact assessment in 2008
- A map of river flows up to 2050, will be created using UKCIP02 scenarios by autumn 2008
- An assessment of the climate vulnerability of all our Biodiversity Action Plan (BAP) species will be undertaken, starting with Salmon
- Project to examine how waste management sites will be affected by future climate change and how better management practices may alleviate the increased risks this poses for the environment and human health.
- Working with key partners such as the National Farmers Union (NFU) and Country Landowners Association (CLA) on the Farming Futures project to communicate climate change adaptation issues, taking the lead on water management issues.
- Influencing the development of agri-environment schemes to include options for water efficiency, rural Sustainable Drainage Systems (SUDS) and better soil management.
- A number of projects examining the importance of Peat uplands for both adaptation and mitigation efforts

## 5. KEY EXTERNAL DRIVERS

5.1 The climate change adaptation agenda has historically lagged the mitigation agenda. However, recent extreme weather events have resulted in a renewed focus on adaptation, with it rising up the political agenda. There are now a number of significant drivers and policy changes which will drive action on adaptation over the course of this strategy, including:

### **1. *Climate Change Bill (Act)***

The Climate Change Bill (Act) will be the single biggest driver for action on adaptation over the coming three years. When first published in March 2007, the draft Bill had only one clause on adaptation – for Government to produce a national climate change risk assessment every 5 years. The Environment Agency pushed to considerably strengthen the adaptation elements and it now contains a new duty on Government to produce an Adaptation Policy Programme, a new power for Ministers to direct public authorities and statutory undertakers (e.g. water companies or infrastructure providers) to address adaptation risks if they fail to do so voluntarily and an Adaptation sub-committee of the Committee on Climate Change. The Environment Agency will work with Government to deliver these measures, providing both policy advice as well as leading by example. We will work with Government and stakeholders to ensure these new measures deliver adaptation across Whitehall, and in public bodies and businesses.

## **2. UK Climate Impacts Programme Scenarios 2008 (UKCIP08)**

The UK Climate Impacts Programme (UKCIP) are developing the next generation of climate change impact scenarios (UKCIP08). These new scenarios will be considerably more advanced than the existing UKCIP02 scenarios, presenting information for the first time in a 'probabilistic' way for a range of climate variables. We have been working with UKCIP to help develop the scenarios and the user interface, and we contribute to their national steering group. We have also been working to build momentum towards their launch in November 2008. To prepare for their release, the Environment Agency is investing in undertaking a major research and communications project to 'translate' the scenarios into a format applicable to the Agency's work and priorities. As a result, the launch of UKCIP08 is eagerly anticipated.

## **3. Local Area Agreements (LAA)**

The new Local Government Performance Framework<sup>2</sup> devolves more power to local authorities. It contains 198 National Indicators to assess progress, and Local Authorities are required to select 35 of these for inclusion within a 'Local Area Agreement'. This then acts as the basis for a 3 year 'improvement programme'. The Environment Agency was instrumental in pushing for an indicator on 'Adapting to Climate Change' (NI 188), which takes Local Authorities through a 5 stage process of assessing climate risks, developing an action plan to address those risks, through to implementation and monitoring<sup>3</sup>. The Environment Agency has been promoting NI188 in local negotiations to agree LAAs, with approximately a third (48) of Upper Tier Local Authorities including it in their LAA. The Environment Agency will continue to work with those local authorities that have chosen NI188 to deliver local adaptation measures.

## **4. Planning Policy Statement 1 (Climate Change) and the Planning Bill (Act)**

Planning policy has a key role to play in delivering resilient communities and reducing vulnerability to climate change. The Environment Agency has worked closely with the Department for Communities and Local Government (CLG) to develop both 'Planning Policy Statement 1 (PPS1): Supplement on Climate Change and Planning'<sup>4</sup> as well as the Planning White Paper and subsequent Planning Bill (Act). The PPS1 Supplement now contains significant climate change adaptation elements thanks to our input, putting climate risk and vulnerability at the heart of the planning system. Similarly, we have continually advised Government to ensure the Planning Bill (Act) delivers on climate change and it now contains a new duty on local authorities to ensure Local Development Frameworks take account of climate change adaptation (and mitigation).

## **5. Working in the English Regions and Wales.**

The Environment Agency is actively engaged in the English Regions and in Wales, influencing both planning and economic development policy to ensure they take account of climate change. We have made considerable progress on influencing external policy agendas (e.g. Regional Spatial Strategy, Regional Economic Strategy, and Regional Climate Change Action Plans), working with Regional Climate Change Partnerships and by developing regional specific research projects (e.g. Thames Estuary 2100 project, ESPACE Project, and Adaptation on the Wear)<sup>5</sup>. The Welsh Assembly Government (WAG) has also launched its Climate Change Commission, of which adaptation is a major strand<sup>6</sup>. We will continue to work on adaptation in the English regions and in Wales, and in particular will aim to ensure changes to regional governance in England (Sub-National Review)<sup>7</sup>, and the development of forthcoming Single Regional Strategies, address climate change adaptation. The Welsh Assembly Government will also be bringing forward its climate change work programme.

## 6. EU White Paper on Adaptation

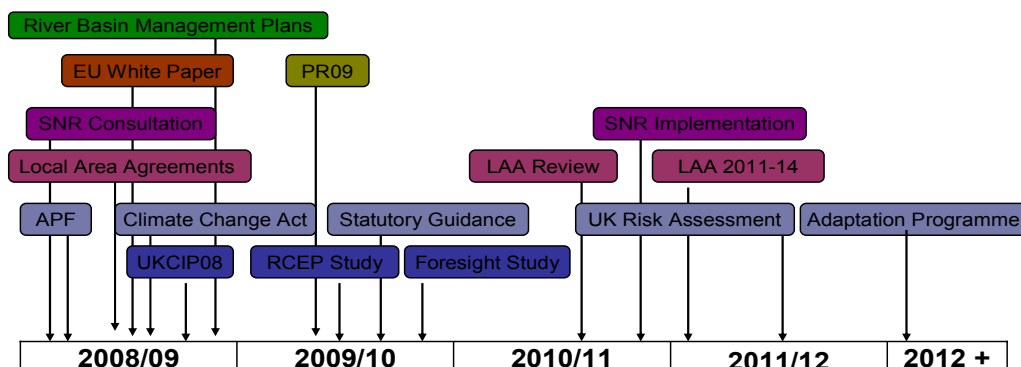
The European Commission published a 'green paper'<sup>8</sup> consultation document on adaptation in June 2007 which sets out 4 pillars for EU action – (1) Early action in the EU, including integrating adaptation into the development and deliver of EU legislation and funding programmes; (2) Integrating adaptation into the EU's external actions, and in particular through its work with developing countries; (3) Expanding research programmes on climate impacts, vulnerability and adaptation; and (4) engaging with citizens. The EU plans to publish its 'white paper', a statement outlining the Commissions policy, on adaptation by autumn / winter 2008. The Environment Agency will work with the Commission, the European Environmental Protection Agencies (EPA) Network and other stakeholders to implement these proposals.

## 7. Royal Commission for Environmental Pollution and Foresight Studies

Both the Royal Commission for Environmental Pollution<sup>9</sup> and the UK Government's Foresight Programme<sup>10</sup> have influential studies underway which will focus on climate change adaptation. Foresight is undertaking a major study on 'Land use futures' in the UK, with climate change as a cross cutting theme. The Environment Agency has commissioned its own work to feed into that project and we will work with the Foresight team to ensure future climate risks and adaptation are taken properly into account in that work. Similarly, the Royal Commission for Environmental Pollution has recently announced it will conduct a major study on adaptation, with a likely focus on delivering adaptation on the coast, for biodiversity and freshwater.

5.2 Other drivers include the Periodic Review 2009 (PR09), the publication and implementation of the Pitt Review, the development of a long-term investment strategy for flood risk management, the development and implementation of River Basin Management Plans, the target to halt biodiversity loss by 2010, and the Environment Agency's newly acquired duty to have the strategic overview for both the coast and inland flooding.

## External drivers and milestones



## 6. A REVISED STRATEGY (2008-11) - TOWARDS ALL-AGENCY COVERAGE

6.1 As the external policy agenda gains momentum, and the impacts of extreme weather events makes climate change more visible, the need for the Agency to deliver the Vision set out in Paragraph 1.1- that is, to ensure that all aspects of the Agency have integrated climate risk into their core business and are delivering environmental outcomes consistent with this - becomes ever more urgent.

6.2 Our revised Climate Change Adaptation Strategy (2008-11) will deliver –

- **A step change in delivering adaptation across the organisation with the rapid transition from 7 priority functions (as currently) to all Agency coverage, with an additional 8 Technical Briefing Papers and Action Plans completed by the end of 2008/09:** Water Framework Directive (cycles 2 and 3), Water Quality & Chemicals, Marine, Recreation & Navigation, Industry Regulation & Air Quality, Environmental Policy, Radioactive Substances Regulation and Internal Environmental Management & Properties.
- **The development of an Agency-wide Climate Change Adaptation Programme by April 2010 which is incorporated into the next Corporate Strategy, also due in April 2010.** The Climate Change Adaptation Programme will build on the individual functional Adaptation Action Plans ensuring our delivery is strategic, integrated across the business and prioritising the biggest risks from climate change.
- The immediate establishment of a **high-level Climate Change Programme Board** to oversee and drive delivery of this strategy as well as the delivery of the Climate Change Adaptation Programme. The Board will play a key role in identifying cross-directorate adaptation priorities and resolve any issues that arise. The membership and terms of reference is shown in Appendix 5.
- **A rolling programme of delivery on adaptation**, ensuring those functions which already have Action Plans can focus on delivery, with more functions coming 'on stream' as the new strategy is implemented. Delivery will effectively be building up throughout the development of the Adaptation Programme.
- Ensuring **implementation issues** through Operations (Regions, Wales and Areas) are fully integrated into the development, delivery and monitoring of adaptation work programmes.
- Publication of a **major report in 2009** showing how the Agency is putting adaptation into action.
- Development of an **Adaptation Advocacy Plan** to capitalise on the external opportunities for influencing and to establish an increased platform for our work on adaptation. As delivery through the functions increases we will utilise examples and case studies to enhance our credibility and use our experience and knowledge to advise Government and stakeholders.

6.3 The revised Climate Change Adaptation Strategy will not be delivered in isolation but will dovetail with other work already underway in the Climate Change & Risk Team, including the delivery of the Climate Change Communications Strategy and the delivery of science projects through the Climate Change Science Programme.

## 7. THE CLIMATE CHANGE ADAPTATION PROGRAMME & BOARD

7.1 To date, Functional Adaptation Action Plans have been developed through a bilateral dialogue between Head Office policy functions and the Climate Change & Risk Team. While this has allowed for a focussed and efficient process, it has resulted in little cross-functional or cross-directorate dialogue and has failed to engage Operations, (Regions, Wales and Areas)<sup>11</sup>.

7.2 While most functions are able to progress some adaptation actions on their own, increased delivery will require more co-operation between functions and directorates as well as greater involvement from Operations (Regions, Wales and Areas). The development of a Climate Change Adaptation Programme – and the rapid transition from seven functions to Agency-wide coverage - is an opportunity to capitalise on these potential synergies and to ensure more effective implementation.

7.3 The aim of the **Cross-Directorate Adaptation Programme** will be to –

- Ensure every policy function has assessed climate change risks and vulnerability
- Ensure adaptation actions across functions and directorates is co-ordinated
- Aid delivery through Operations (Regions, Wales and Areas)
- Resolve policy conflicts between different adaptation options
- Identify cross-directorate adaptation issues, including synergies between functions
- Identify knowledge gaps, regulatory barriers and implementation issues
- Up-skill regional and area teams to deliver adaptation actions
- Provide a high-level steer for the Climate Change Science Programme

7.4 The high-level **Climate Change Programme Board** will oversee this process and provide an authoritative forum for climate change adaptation issues, including -

- Oversight for the delivery of the Climate Change Adaptation Strategy 2008-11
- Development of the Climate Change Adaptation Programme in liaison with the Climate Change & Risk Team and functional climate change leads
- Sign-off functional Adaptation Action Plans
- To resolve any policy conflicts around climate change that may arise from different functional priorities
- Ensure delivery through Operations (Regions, Wales and Areas).
- Provide authoritative policy recommendations to the Chief Executive, Directors and where necessary the Board.
- Ensuring that appropriate resources are allocated for climate change adaptation activities
- Provide a leadership role, championing climate change throughout the organisation.

## **Climate Change Programme Board**

**Chair** – David King, Director of Water Management

### **Board Members -**

- Tony Grayling, Head of Environmental Policy
- Chris Hewett, Head of Climate Change
- Pam Gilder, Head of WRM & River Basin Management
- Ian Barker, Head of Water Resources & CC Science Board
- David Rooke, Head of FRM
- Hilary Aldridge, Head of EP Strategic Programmes
- Ed Mitchell, Head of EP Policy and Regulation
- John Seager, Head of Environment Strategy
- Christine Tuckett, Head of Science Strategy
- Chris Mills, Wales Regional Director & OMT Adaptation lead
- Andrew Wood, National Operations Programme Director / Operations Executive Group
- Katherine Gorbing, Head of External Relations
- Lisa Pinney, Head of Strategy Implementation
- DEFRA & WAG Representatives

## **8. IMPLEMENTATION**

8.1 The core elements of the strategy translate into four broad work streams –

1. Delivering adaptation in action,
2. Developing a Climate Change Adaptation Programme,
3. Influencing government and stakeholders, and
4. Using climate science.

8.2 A table outlining these ‘Implementation Workstreams’, including aims, objectives, outcomes and targets, can be found in Appendix 1.

8.3 The Climate Change & Risk Team will co-ordinate the Strategy and provide a Secretariat for the Programme Board. It will also convene ad hoc meetings of the Implementation Group (Appendix 6) consisting of the adaptation policy leads within each of the functions. This group will provide a supporting role to the Climate Change Programme Board by outlining key issues and synergies as well as acting as network of ‘climate change champions’ to help drive adaptation policy through the organisation.

## **9. MONITORING & REVIEW**

9.1 This Strategy will be monitored by the continued use of the Corporate Scorecard measure which tracks a functions progress through the process of developing a Technical Briefing Paper, developing an Action Plan and delivering this through the business planning process. (See Appendix 3 & 4). We anticipate that after 2010/11 we will develop a new Corporate Scorecard measure that is outcome focussed.

9.2 This strategy will be continually reviewed by the Climate Change Programme Board and will be formally reviewed in 2010/11 as we move into the delivery phase of the forthcoming Climate Change Adaptation Programme.

## **10. CONCLUSION & OUTCOMES**

10.1 The Climate Change Adaptation Strategy (2008-11) will deliver our vision of having climate change risks embedded across all policy functions and effective, efficient and well co-ordinated delivery across functions, Regions, Wales and Areas.

10.2 The main outcomes we anticipate are-

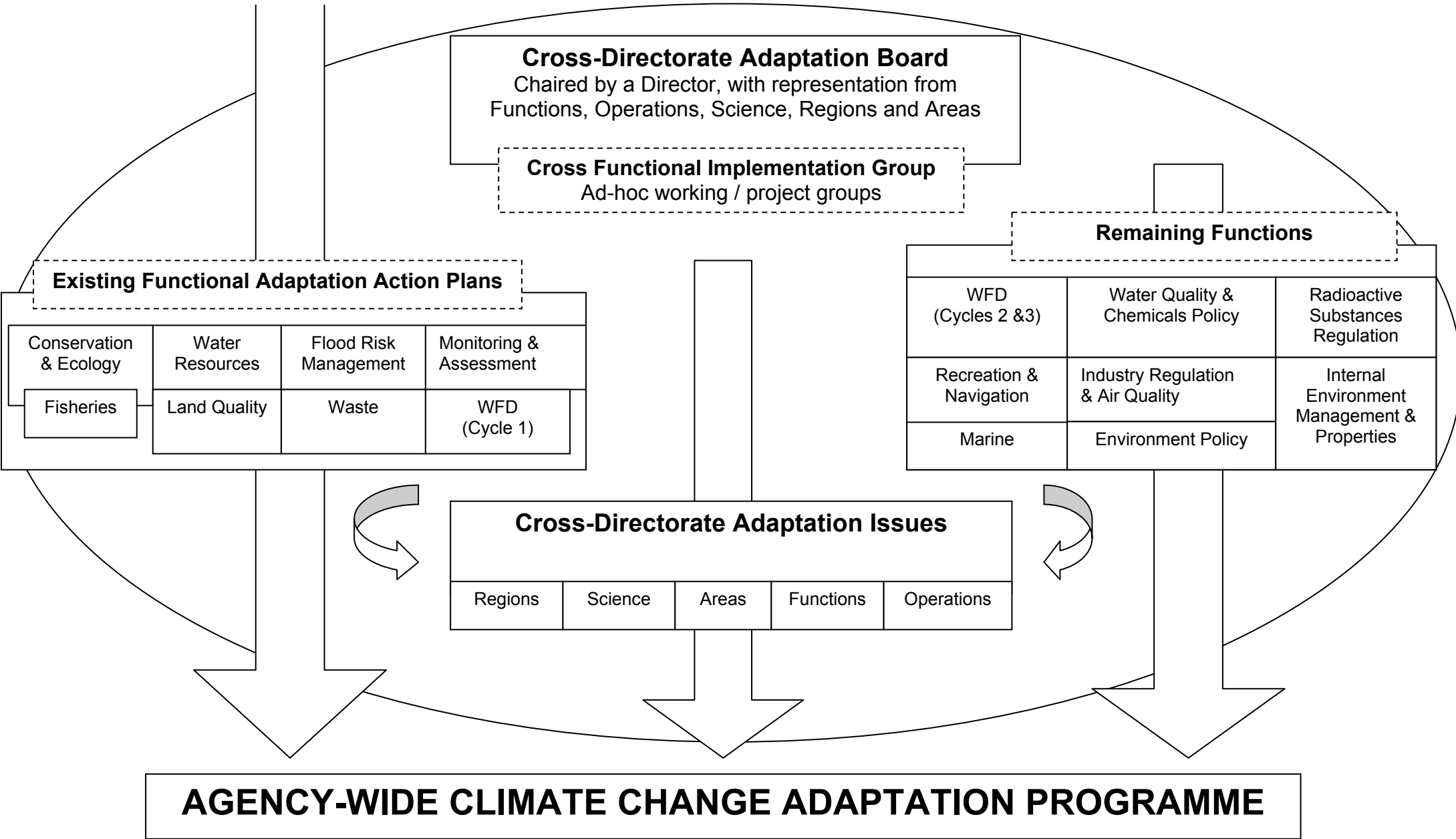
- Climate change risks understood and incorporated into core business
- Growing number of examples of changes in policy, processes and activities on the ground
- Aligned and co-ordinated delivery across directorates, functions and operations
- Fit for purpose to deliver the forthcoming UK adaptation programme
- Increased credibility and ability to influence Government and stakeholders

***Chris Hewett & Mark Ellis-Jones***  
***Climate Change & Risk Team***  
***June 2008***

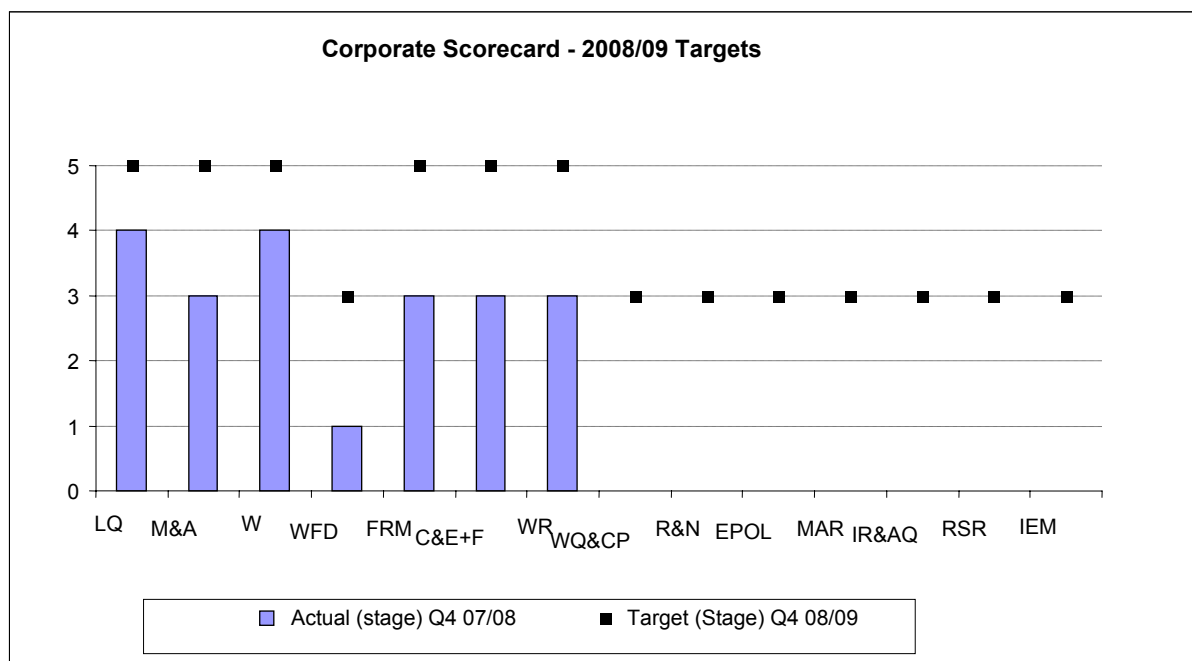
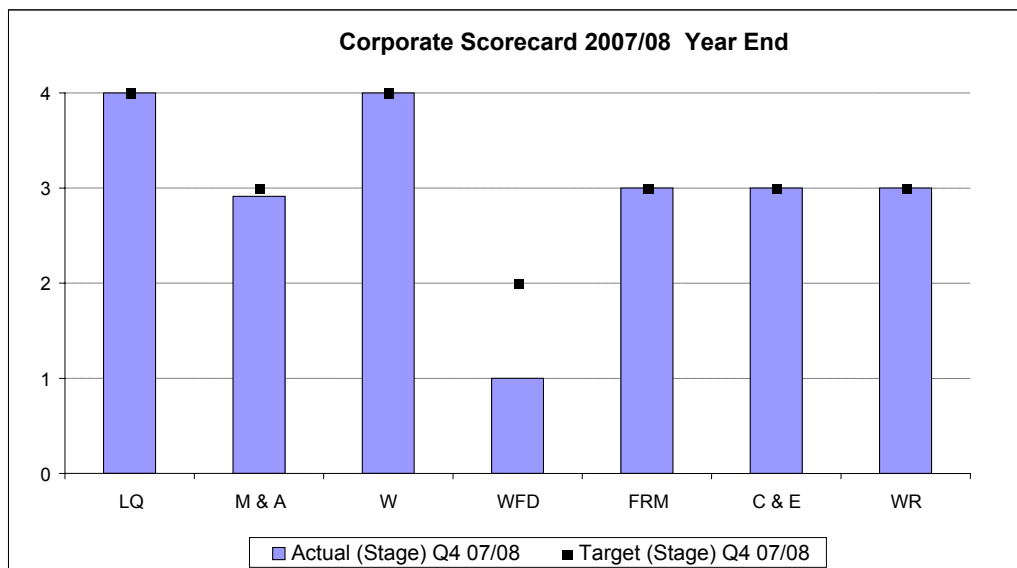
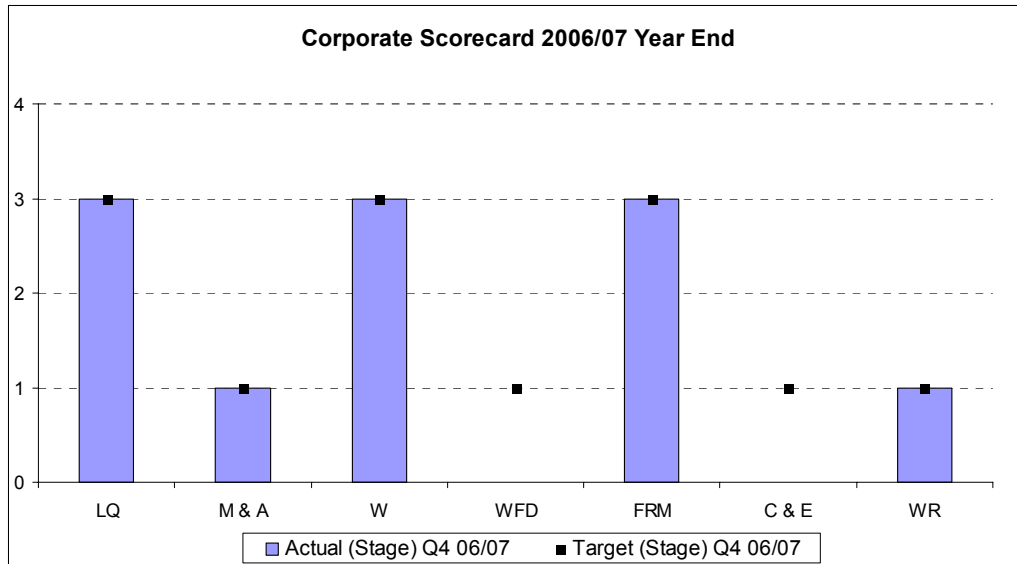
**APPENDIX 1: Implementation Work streams – Aims, Objectives, Outcomes and Targets**

<b>Work stream</b>	<b>Aim(s)</b>	<b>Objective(s)</b>	<b>Outcome(s)</b>	<b>Target(s)</b>
<b>Work stream 1</b> Delivering Adaptation in Action	To ensure effective delivery of existing adaptation actions	Implementation of existing Adaptation Action Plans	Examples of adaptation in action; better environmental outcomes	7 functions report examples by Q2 2008/09, 15 functions by Q2 2009/10, and by Q2 2010/11.
<b>Work stream 2</b> Developing an Agency-wide Climate Change Adaptation Programme	All our core functions have incorporated climate risks into their activities and business plans and are delivering adaptation through policy, process and projects.  To ensure delivery of adaptation actions is co-ordinated between policy functions and across the different parts of the organisation	All remaining functions develop Functional Adaptation Action Plans	Climate change risks integrated into the core business	8 additional functions produced TBPs and draft Action Plans by the end of 2008/09
		Establish a Cross-Directorate Adaptation Board	High-level support and oversight of implementation	Board established in 2008/09 and Agency-wide Climate Change Adaptation Programme completed by April 2010.
		Identify Cross-Directorate Adaptation Issues	Aligned and co-ordinated delivery across directorates and functions	Issues and actions developed by mid-2009, incorporated into an Agency-wide Climate Change Adaptation Programme completed by April 2010.
		Co-ordinated delivery through Operations, (Regions, Wales and Areas)	All relevant staff are aware of adaptation actions, and their role in delivery.	Existing Action Plans successfully rolled out in 2008/09; Agency-wide Climate Change Adaptation Programme rolled out in 2010/11
<b>Work stream 3</b> Influencing Government & stakeholders	To draw on our experience in delivering adaptation as a platform for increased advocacy and to raise our public profile.	To develop an Adaptation Advocacy Strategy	Increased influence and credibility with government and stakeholders	Advocacy Strategy agreed by mid-2008/09, external policy milestones are met.
		Embedding climate change adaptation into the new Corporate Strategy	The Agency is seen as one of the leading public bodies on adaptation	By April 2010, the Corporate Strategy has adaptation as a major theme
<b>Work stream 4</b> Using Climate Science	To ensure the Agency's adaptation decisions are based on sound science and using the latest climate models.	To ensure business decisions are based on the best available science	Key policy staff are using UKCIP08 scenarios to inform business decisions	By Nov 2008, key staff are ready to use UKCIP08 scenarios. By 2010/11 the agency-wide Adaptation Programme can demonstrate how it is based on UKCIP08

**Climate Change Adaptation Strategy (2008-11)**



## APPENDIX 3 - Corporate Scorecard Performance and New Targets



### 7 Stages

#### **Stage 1**

Technical Briefing Paper

#### **Stage 2**

Adaptation Action Plan

#### **Stage 3**

50% of actions in business plan

#### **Stage 4**

Interim Progress Report

#### **Stage 5**

100% of actions in Business Plan

#### **Stage 6 (2009/10)**

Review of actions and integration into a draft Adaptation Programme

#### **Stage 7 (2009/10)**

Full integration into the Adaptation Programme and actions in business plans

*Note: It was agreed that WFD would not need to produce an Action Plan for the first cycle of River Basin Management Plans, opting instead to 'screen' the programme of measure for adaptation. WFD will complete an Action Plan going forward for Cycles 2 & 3*

#### APPENDIX 4 - CORPORATE SCORECARD MATRIX 2008-10

Year	Stage	Q2 2008/09	Q4 2008/09	Q2 2009/10	Q4 2009/10
1	<b>Stage 1:</b> Technical briefing paper (TBP) being developed to scope scale of the impact for the function (including audit of business plan) to assess potential risks from climate change	WQ&CP, R&NAV, EPol, RSR, IR&AQ, MR, IEM			
	<b>Stage 2:</b> TBP completed and function has defined and agreed an adaptation action plan	WFD			
	<b>Stage 3:</b> Function is on schedule to incorporate 50% of the agreed adaptation action plan in to its business plan		WFD, WQ&CP, R&NAV, EPol, RSR, IR&AQ, MR, IEM		
2	<b>Stage 4:</b> Interim Progress Report on delivery of actions and review of Action Plan to identify remaining priorities for the next business planning cycle.	LQ, W, FRM, CE+F, WR, M&A.			
	<b>Stage 5:</b> Function has fully incorporated 100% of agreed adaptation actions into its business plan		LQ, W, FRM, CE+F, WR, M&A		
3	<b>Stage 6:</b> Review of actions, including an interim progress report on delivery, to identify actions and cross-functional priorities for integration into a draft Agency-wide Adaptation Programme			LQ, W, FRM, CE+F, WR M&A, WFD, WQ&CP, R&NAV, EPol, RSR, IR&AQ, MR, IEM	
	<b>Stage 7:</b> Function has merged relevant priorities from its Action Plan into the Adaptation Programme, and identified in its business plan further actions for delivery.				LQ, W, FRM, CE+F, WR M&A, WFD, WQ&CP, R&NAV, EPol, RSR, IR&AQ, MR, IEM

*Note: It was agreed that WFD would not need to produce an Action Plan for the first cycle of River Basin Management Plans, opting instead to 'screen' the programme of measure for adaptation. WFD will complete an Action Plan going forward for Cycles 2 & 3*

## **APPENDIX 5 CLIMATE CHANGE PROGRAMME BOARD**

### **TERMS OF REFERENCE**

**SCOPE:** The Climate Change Programme Board (CCPB) will provide oversight for all the Environment Agency's work on climate change adaptation and mitigation, including –

- The Climate Change Adaptation Strategy (2008-11)
- Mitigation Action Plan (Directors Policy Group, Paper 3.2, 22 May 2008)

#### **Terms of Reference:**

The Climate Change Programme Board will –

- Have oversight for all the Agency's work on climate change adaptation and mitigation.
- Sign-off functional Adaptation Action Plans
- Develop the Climate Change Adaptation Programme by April 2010 in liaison with the Climate Change & Risk Team and functional climate change leads
- Resolve any policy conflicts around climate change that may arise from different functional priorities and make recommendations to the Directors Policy Group.
- Ensure delivery through Operations (Regions, Wales and Areas)
- Provide authoritative policy recommendations to the Chief Executive, Directors and where necessary the Board.
- Ensuring that appropriate resources are allocated for climate change activities
- Provide a leadership role, championing climate change throughout the organisation

#### **The Climate Change Programme Board**

**Chair** – David King, Director of Water Management

#### **Board Members** –

- Tony Grayling, Head of Environmental Policy
- Chris Hewett, Head of Climate Change
- Pam Gilder, Head of WRM & River Basin Management
- Ian Barker, Head of Water Resources & CC Science Board
- David Rooke, Head of FRM
- Hilary Aldridge, Head of EP Strategic Programmes
- Ed Mitchell, Head of EP Policy and Regulation
- John Seager, Head of EP Strategy
- Christine Tuckett, Head of Science Strategy
- Chris Mills, Wales Regional Director & OMT Adaptation lead
- Andrew Wood, co-chair of Operations Executive Group
- Katherine Gorbing, Head of External Relations
- Lisa Pinney, Head of Strategic Development
- DEFRA & WAG Representatives

## APPENDIX 6

### IMPLEMENTATION GROUP

The Implementation Group comprises of the policy leads in each Head Office policy function and will be supported by the Climate Change & Risk Team.

<b>Function</b>	<b>Policy Lead</b>
Flood Risk Management	Bill Donavon
Conservation & Ecology	Mark Diamond
Fisheries	Ian Johnson
Agriculture / Land Quality	Jamie Letts
Water Resources	Andy Turner
Water Quality & Chemical Policy	Tony Warn
Water Framework Directive	David Forrow
Radioactive Substances Regulation	Dave Bennet
Industry Regulation & Air Quality	Andrew Hitchings
Marine	Lindsey Tucker
Recreation & Navigation	Roger Goulding
Waste	Chris Saville
Monitoring & Assessment	Doug Wilson
Science	Neil Weatherley & Glenn Watts

## REFERENCES

---

<sup>1</sup> <http://www.ukcip.org.uk/>

<sup>2</sup> <http://www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/>

<sup>3</sup> <http://www.communities.gov.uk/publications/localgovernment/finalnationalindicators>

<sup>4</sup> <http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/ppsclimatechange/>

<sup>5</sup> Thames Estuary 2100 (TE2100) Project - <http://www.environment-agency.gov.uk/te2100/>  
European Spatial Planning Adapting to Climate Events (ESPACE) - [www.espace-project.org/](http://www.espace-project.org/)  
Climate Change Adaptation on the Wear Catchment -

<http://www.neccap.org/NE%20Adapt/pdf/ClimateChangeAdaptationWearSummaryReport>

<sup>6</sup> <http://wales.gov.uk/news/ThirdAssembly/Environment/2007/1867604/?lang=en>

<sup>7</sup> <http://www.berr.gov.uk/regional/sub-national-review/page40430.html>

<sup>8</sup> [http://ec.europa.eu/environment/climat/adaptation/index\\_en.htm](http://ec.europa.eu/environment/climat/adaptation/index_en.htm)

<sup>9</sup> <http://www.rcep.org.uk/>

<sup>10</sup> <http://www.foresight.gov.uk/drumbeat/index.asp>

11 Adaptation work in Regions and Wales has been focussed on influencing the external policy agenda. Increasingly, Areas teams are also having a role in influencing Local Area Agreements. A Progress Report on the excellent work of Regions in delivering on climate change advocacy is available on request.