

Summary

1 Much of the debate about climate change policy in recent years has focused on the efforts needed to reduce greenhouse gas emissions and thus mitigate climate change. But most of the changes in climate that will happen over the next 30 to 40 years have already been determined by past and present emissions. Scientific evidence set out in the most recent projections of future climate change for the UK – the UK Climate Projections 2009 – shows that the UK is likely to experience warmer and wetter winters, hotter and drier summers, sea level rise, and more severe weather. The potential impacts of these changes include increased water stress, increased risk of flooding and heat waves, and faster coastal erosion. These impacts could have wide consequences across the UK, for example, by posing risks to the functioning of critical infrastructure such as energy, transport and water systems, or by posing risks to public health or the natural environment.

2 Adapting to the changing climate across society and the economy is therefore necessary to deal with the unavoidable impacts of climate change already in train. There will also be opportunities to take advantage from some more positive aspects of climate change in some sectors, for example, agriculture. If Government, the wider public sector and private organisations and individuals prepare for the future climate changes now, necessary adaptation can be identified early, planned for and undertaken in the most cost-effective way.

3 This briefing by the National Audit Office (NAO) is in response to a request from the Environmental Audit Committee to provide an overview of government policy on adapting to climate change, including the implications of the Climate Change Act 2008 and the cross-government Adapting to Climate Change Programme, and progress across government Departments in identifying and managing risks from future climate change impacts. It presents Departments' self-assessments of their current capacity to assess and manage these risks, using a framework for effective climate change risk management developed by the NAO for the purposes of this briefing.

4 Adaptation is a devolved issue, and this briefing covers government policy in England and the UK for reserved matters, not the work of the national authorities in Wales, Scotland or Northern Ireland in regard to their devolved functions. The briefing covers government policy on domestic climate change adaptation, rather than action internationally to help developing nations adapt to climate change.

Overview of government policy on adapting to climate change

5 The Climate Change Act 2008 (the Act) established a statutory framework for work on climate change adaptation, including the requirement to undertake a UK-wide Climate Change Risk Assessment (CCRA) and report on it within three years of the Act coming in to force (i.e. in January 2012), and also to set out a statutory National Adaptation Programme as soon as practically possible after publication of the CCRA and report on it at two yearly intervals.

- Paragraph 2.3 in Part 2 sets out the requirements of the Climate Change Act 2008 relating to adaptation.

6 The cross-government Adapting to Climate Change Programme (ACC Programme) was established in 2008 to bring together and drive forward work in Government and the wider public sector on adaptation in England and the UK for reserved matters. The ACC Programme is directed by a Programme Board with senior representatives from most central Government Departments. The Department for Environment, Food and Rural Affairs (Defra) provides the ACC Programme delivery team, but responsibility for embedding adaptation into individual government policies is the responsibility of the relevant government Department.

- Paragraphs 2.5 and 2.6 in Part 2 cover the governance arrangements for the ACC Programme.

7 The ACC Programme is currently undertaking the groundwork for the statutory National Adaptation Programme to be put in place by 2012, and the second phase of its work from 2012 will be to implement this National Adaptation Programme. The groundwork involves:

- Developing a more robust and comprehensive evidence base about the impacts and consequences of climate change on the UK.
- Raising awareness of the need to take action now and help others to take action.
- Working across Government to embed adaptation into Government policies, programmes and systems.
- Measuring success and taking steps to ensure effective delivery.

8 The ACC Programme is undertaking work to develop a more robust and comprehensive evidence base about the impacts and consequences of climate change on the UK to guide the priorities of the National Adaptation Programme. Key elements include:

- The UK Climate Change Projections 2009 (the Projections), published in June 2009, which set out the latest scientific evidence base on future climate changes for the UK.
- The UK Climate Change Risk Assessment (CCRA), the aim of which is to identify, assess, and where possible monetise the key climate change risks and opportunities at UK, national and regional level to inform government policy and spending.
- Additional 'adaptation economic analysis' to improve understanding of the costs and benefits of adaptation measures; to give an overall indication of the scale of the challenge; and to help identify priority areas for action.

The ACC Programme considers that the CCRA and the economic analysis are challenging and complex undertakings. It emphasises that the CCRA will be the first in a rolling cycle of national risk assessments, rather than a definitive assessment of all risks.

- Paragraphs 2.9 to 2.17 in Part 2 cover the ACC Programme work to develop the evidence base for adaptation.

9 The ACC Programme is also working to raise awareness of the need to take action now and help others to take action, through:

- The work of the UK Climate Impacts Programme (UKCIP), which since 1997 has been funded by Defra and the Devolved Administrations as an advisory service to help organisations access scientific information on climate change and consider their approach to adapting to climate change.
- A substantial training and support programme, to be delivered by UKCIP and the ACC Programme, to help users understand and get the most out of the new Projections.¹
- The ACC Programme's Local and Regional Partnership Board, which brings together key stakeholders across local and regional government, and aims to facilitate action on climate change adaptation at a local and regional level by highlighting best practice, enhancing skills, providing toolkits and encouraging joint working between local and regional agencies. The Board has a small funding programme which supports projects to meet its aims.
- Paragraphs 2.18 to 2.21 in Part 2 cover the ACC Programme work to raise awareness and help others to take action.

¹ "The Projections in Practice": <http://www.defra.gov.uk/environment/climatechange/adapt/adaptation/projections-in-practice.htm>

10 The ACC Programme is working to embed adaptation into Government policies, programmes and systems. The ACC Programme recognised at its launch in 2008 that “there was a long way to go until all Government programmes routinely consider climate change risks at policy and delivery stages, and are planned accordingly”, and highlighted that it was particularly important for infrastructure and investment decisions with a long life-span to take into account the long term consequences of climate change to avoid the need for costly retrofitting. Key developments include:

- New guidance to help Government address adaptation in government policy and investment appraisal and decision making processes. This supplementary guidance for the HM Treasury’s Green Book: *Appraisal and evaluation in central government*, was published alongside the launch of the Projections in June 2009.
- A project to identify and overcome relevant barriers to improving the future resilience of water, energy and transport infrastructure – for example, from financing, regulatory arrangements, or lack of awareness, skills or expertise, as well as the technical risks.
 - Paragraphs 2.22 to 2.33 in Part 2 cover ACC Programme work to embed adaptation into Government policies, programmes and systems.

11 The ACC Programme also wants to measure its success and take steps to ensure effective delivery of the Programme. Measuring progress on adaptation is difficult: the success of measures to increase resilience may not be observed for 30-50 years and most of the current effort is around building capacity to adapt through undertaking risk assessments, training and relevant research. The ACC Programme is working to develop indicators to measure its progress, but work is at an early stage. Other key elements include:

- A measure of progress on embedding adaptation into the National Indicators for measuring local government performance (NI 188), to be reported for the first time in summer 2009.
- A Reporting Power established under the Climate Change Act that allows Government to require public authorities and ‘statutory undertakers’ (companies such as water and energy utilities) to report to Government on how they have assessed relevant climate change risks, and how they will address them. The ACC Programme is consulting on a strategy for use of the Reporting Power, which proposes that 103 priority organisations should be asked to report in 2010, out of over 100,000 reporting authorities potentially covered by the terms of the Act. There is currently no statutory requirement for this to apply to private sector companies that do not fall under the ‘statutory undertakers’ definition under the Act.

- The recent commitment by Departments involved in the ACC Programme to prepare high-level Adaptation Plans by spring 2010. The ACC Programme expects to start collecting information systematically to report on departments' progress in key policy areas to the Programme Board. It has not yet specified whether, or how, departments' capacity to adapt will be gauged or reported, as this will be done in the context of the development of the new Departmental plans.
 - Paragraphs 2.34 to 2.40 in Part 2 cover the ACC Programme work to measure its success and ensure delivery of the Programme.

12 The Climate Change Act also established the Adaptation Sub-Committee (ASC) of the Committee on Climate Change to provide external expertise and scrutiny on adaptation work. The ASC has a statutory duty to provide advice and scrutiny on the UK Climate Change Risk Assessment, report on progress with the National Adaptation Programme (for England and reserved matters), and respond to requests for advice on adaptation from national authorities (of England, Scotland, Wales and Northern Ireland).

- Paragraph 2.4 in Part 2 covers the ASC.

Departments' self-assessment of their current capacity to assess and manage risks from future climate change impacts

13 Climate change adaptation, and assessment of risks from future climate change impacts, is a relatively new issue for most Departments, but Departments' responses to our survey showed signs of growing awareness and understanding, progress in identifying and assessing risks, and examples of individual policy responses. Most of the Departments which were in a position to assess the significance of risks from future climate change impacts concluded that these risks are potentially significant to some of their objectives, whereas Defra considers climate change risks to be significant threats to all of its Departmental objectives. Departments identified a wide range of risks that they needed to manage, in particular the risks of flooding and coastal erosion, to business and the economy, infrastructure, agriculture, food security and the natural environment, homes, buildings and communities, and public health.

- Part 3 sets out an overview of Departments' current assessment of risks from future climate change impacts, and examples of policy responses.

14 In Departments' self-assessment of their current capacity to assess and manage climate change risks, some Departments, such as the Department for Communities and Local Government, Defra, the Ministry of Defence, the Department of Energy and Climate Change, and the Forestry Commission, considered they were at the stage of implementing climate change risk management strategies, others, such as the Department for Business, Innovation and Skills (formed from the Department for Innovation, Universities and Skills and the Department for Business, Enterprise and Regulatory Reform, which are represented separately in this briefing), the Home Office and the Ministry of Justice, reported to us that they were at an earlier stage in developing their capacity to manage these risks. However, even these Departments were able to highlight relevant risks to their objectives, and give examples of policy responses in some areas.

- Part 4 presents the results of Departments' self assessment of their current capacity to assess and manage climate change risks, using a framework for effective climate change risk management developed by the NAO for the purposes of this briefing.

15 Departments highlighted to us that climate change risk management is a challenge because of the long timescales and uncertainties involved; the difficulty in prioritising resources between addressing current needs and future risks; and the need to build capacity. Some of the actions required to adapt to a changing climate will involve significant costs. For example, the Environment Agency predicts that the potential cost of providing adequate flood defences is likely to double to £1 billion per year by 2035. Departments have highlighted to us that there will be more to do to develop the evidence base to reach risk-based decisions on adaptation, using quantitative evidence of the costs and benefits of adaptation as developed by the CCRA and associated economic analysis, and deciding upon approaches to funding them.

- Appendix 3 contains a summary of each individual Department's self-assessment of the risks to their objectives and their capacity to assess and manage these risks.