

The UK Climate Change Risk Assessment

Context

As a result of the Climate Change Act (2008) the UK is the first country in the world to have a legally binding, long-term framework to cut carbon emissions. The Climate Change Act also creates a framework for building the UK's ability to adapt to climate change. Part of the Act requires the Government to lay before Parliament assessments of the risks posed to the UK by climate change.

The first report will be laid before Parliament in January 2012 and an updated Assessment will be issued every 5 years. This is an ambitious task, and the timetable for the first assessment means it will need to build as much as possible on existing and ongoing evidence and approaches. The risk Assessment framework for the CCRA has been modelled on the UK Climate Impacts Programme (UKCIP) risk and uncertainty framework (UKCIP, 2003) which itself builds on standard risk assessment approaches.

Stage 1. Assess Risks

The analysis will be undertaken in 3 tiers, with the level of detail increasing with each tier:

- Tier 1 provides an initial qualitative assessment
- Tier 2 is more detailed with some quantification and
- Tier 3 is a detailed assessment.

Among the dozen or so sectors we are using to gather evidence, (e.g. health, transport, etc) only a few sectors have sufficient data to enable a Tier 3 analysis, and in most sectors a Tier 2 analysis is the ambition for this first CCRA cycle.

This study will consider the direct and indirect effects of climate change on natural and social systems and the resultant economic, environmental and social consequences. It will include analysis for the UK across about a dozen broad sectors and then repeat the analysis for Devolved Administrations and English regions.

In a few sectors we will quantify and monetise risks ('Tier 3') to inform an economic assessment, but in many sectors the analysis will be constrained by the limitations of the existing evidence base.

Stage 2. Identify adaptation options

The purpose of this stage is to identify the potential adaptation options that could address the major risks, noting the different time frames of consideration (current, near term and longer term). Once we have identified

the options, we will carry out a more systematic analysis of these to characterise their costs, effectiveness and other evaluation criteria.

Stage 3. Appraise Options

The primary goal of the options analysis is to inform the process of prioritising adaptation actions where Government has a rationale to act. The outcomes will be:

- Initial indications of the future cost implications of adapting to climate change for the UK as a whole and for specific sectors and policy areas where the data is available.
- Priorities for government action on adaptation.

The first of these outputs will require high-level monetisation of the expected impacts, and consequences of adaptation options. The approaches used for the second output will vary depending on data availability – the long-term goal is to express costs and benefits using a common metric, but in this cycle it is likely that multi-criteria approaches will be used.

Stage 4. Implementation

Defra will use the risk assessment outputs as the main evidence base to inform the design of the National Adaptation Programme – a statutory adaptation programme that will be implemented in 2012.

More information

More information on adaptation policy in the UK is available at:
www.defra.gov.uk/adaptation.

If you have any specific queries on the Risk Assessment, please contact:
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