



Adaptation to Climate Change

Climate Change will result in more intense rainfall, more frequent flooding and droughts, and will significantly impact our infrastructure clients. This reference document outlines strategic advances in relation to Climate Change Adaptation driven by the Climate Change Act 2008. The challenge to MWH is to ensure that we consider resilience to climate change in the solutions we bid, scope and deliver so our clients can maintain levels of service in the future.

Some Basic Definitions...

Climate Change:

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods - UNFCCC

Climate Change Adaptation:

Means making changes that help us cope with the effects of climate change. It can be used to describe institutional as well as physical adjustments. It is different from mitigation, which means action to reduce greenhouse gas emissions. OFWAT

Climate Change mitigation:

An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases - IPCC

References:

UK Climate Change Risk Assessment: Government Report

The Climate Change Risk Assessment for the Water Sector

Adaptation Reporting Power Reports

MWH Capability Statement – Climate Change

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Climate Change Risk Assessment (CCRA)

The CCRA has used currently available evidence to produce an initial snapshot of how a changing climate may affect the UK up to the year 2100. It analyses the key risks and opportunities that climate change will bring to the UK. "The baseline of the CCRA Evidence Report allows government and others to assess the extent to which our actions and plans are climate resilient and to judge what more needs to be done." (Caroline Spelman, Secretary of State for Environment, Food and Rural Affairs)

The Government has acknowledged that there will be changes to our climate, and has identified 5 key steps in response:

1. Minimise the risk of significant climate change through cutting greenhouse gas emissions;
2. Accept that despite efforts A certain amount of warming is inevitable;
3. Better understand our vulnerability to our current climate;
4. Use the best science to understand the climate changes we may face and their impact on our economy, environment and society;
5. Assess what we can put in place now, and plan for the future to increase the resilience of our economy, environment and society.

Water Sector CCRA Report

The water sector report is one of 11 sector based reports. It addresses 3 themes; pressures on water availability, water quality and the deterioration of water company assets. Its key findings include:-

- Large reductions in summer flows could have significant implications for water supply. However, by making use of increased surplus winter flows, the impact can be minimised
- Summer abstraction may become unsustainable in a large proportion of UK rivers due to low summer flows. In the near term (2020s) a large proportion of rivers could fail existing environmental flow targets.
- The impact of low flows on ecosystems is poorly understood, and flow targets will be regularly reviewed to protect habitats as they change in response to the changing climate.
- Water availability will also be affected by population growth in parts of the UK, and will increase water demand and increase pollution pressures from both point source and diffuse pollution.
- There is an urgent need to consider how to continue to maintain water supplies without causing environmental damage as water demand increases, and supplies diminish.
- Some impacts to water quality and water industry assets are identified in the report, but are predicted with low confidence, and so are not included here.

Similar reports have been produced for the other sectors, and are all held on the DEFRA website.

Adaptation Reporting

The first strategy for using the Adaptation Reporting Power has targeted 91 national infrastructure organisations in the energy, transport and water sectors. These organisations have been asked to set out how climate risks impact on their organisational objectives and the steps they are taking to adapt to them. The reports will provide the government with evidence of organisational capacity in areas critical to national infrastructure and will be considered, along with the CCRA in the development of the National Adaptation Programme. A summary of the key findings of these reports will be published shortly.

The National Adaptation Programme (NAP)

The CCRA along with the reports from the infrastructure organisations will be used as the basis for the development of the National Adaptation Programme (NAP). The Climate Change Act requires the NAP to be produced in England only, but a similar adaptation plan is being produced in Scotland. Published in 2013, the purpose of this programme will be to analyse the costs and benefits from a range of options for adaptation to climate change. The Environment Agency will be the delivery body for the NAP in England, and has new duties to increase resilience to climate change and reducing adverse impacts.

How is MWH helping Clients?

MWH is engaged in the on-going UKWIR research programme providing the water industry with information and approaches to help incorporate climate change impacts and adaptation responses into asset management planning. MWH is also helping individual water companies (e.g. flood resilience for Thames Water). We are working to understand how these changes will impact our clients, and to ensure that we address their needs in the services we offer.

Climate Week Presentations March 12th – 16th 2012

MWH will be hosting a series of lunchtime Lync Presentations to mark Climate Week. The presentations will include:

- Chris Barker – Technical Director Environmental Regulation – Sustainable Catchment Integration Model
- Dr Mark Futter – Principal Hydrologist – The Global Climate Change Alliance – Working the EU and Developing countries to combat climate change
- Dr Stephen Palmer – Principal Process Engineer – How to produce a Low Carbon Strategy that Delivers Value for Money
- Aidan Hickey – MWHT Proposals Engineer and Mark Froggatt – MWHT Design Manager – Carbon Management in a structured capital delivery programme
- Adrian Johnson – Technical Director Carbon – The Implications of the Climate Change Risk Assessment and National Adaptation Programme for the Water Industry