

Climate change – is the UK preparing for flooding & water scarcity?

Adaptation Sub-Committee Progress Report 2012

Lord Krebs Kt FRS 11 July 2012

Extreme weather is likely to become more common as a result of climate change







Flooding in Hebden (Summer 2012)



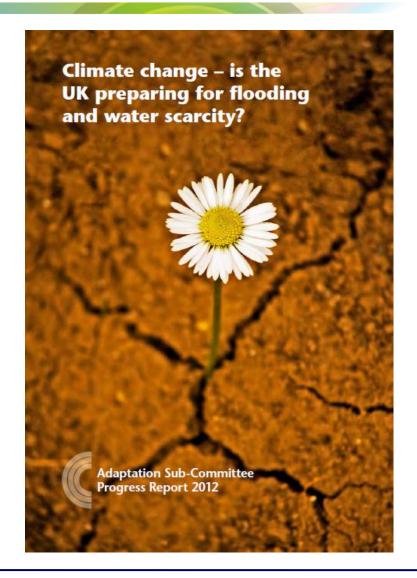
Drought in East Anglia (Spring 2012)



ASC Progress Report 2012

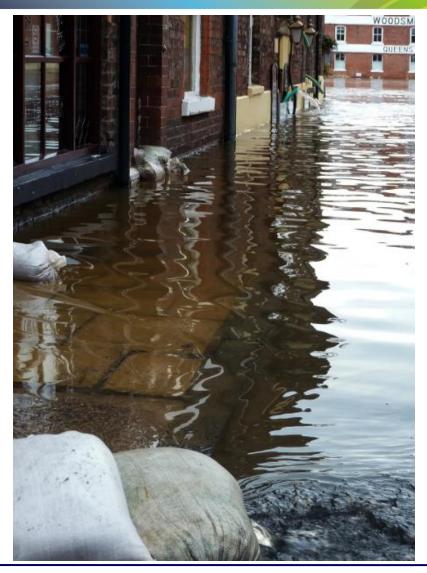


- Measuring progress using the ASC adaptation assessment toolkit
- Focus on flooding and water scarcity
- Recommendations for Government



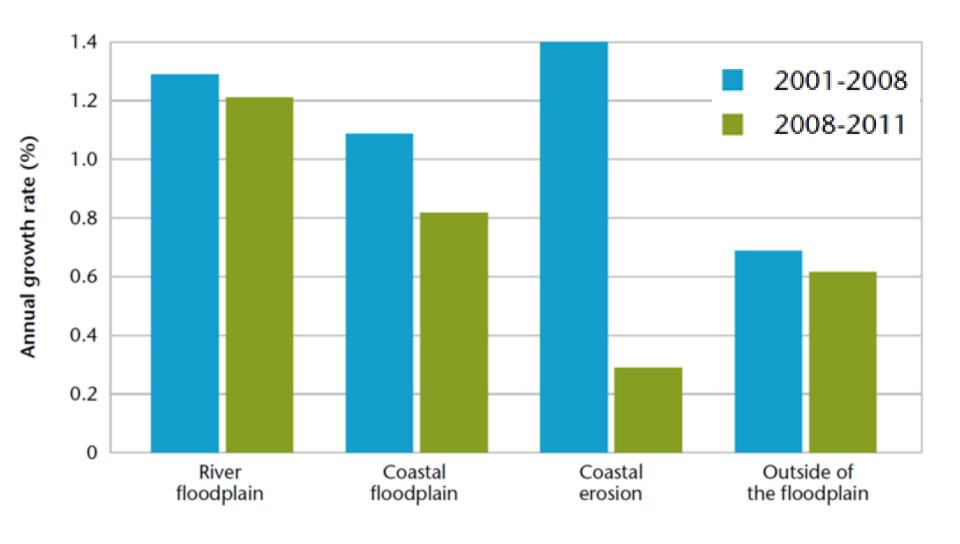
Flooding





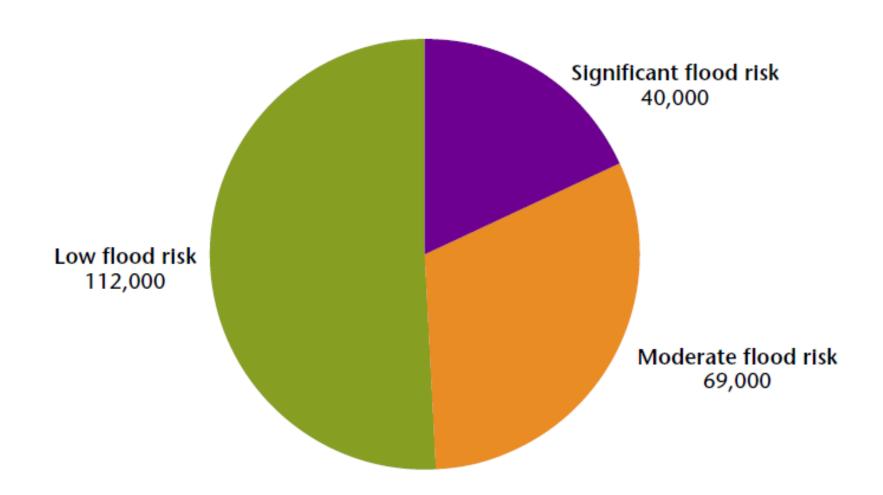
Development in the floodplain grew at a faster rate than elsewhere in England over the past 10 years





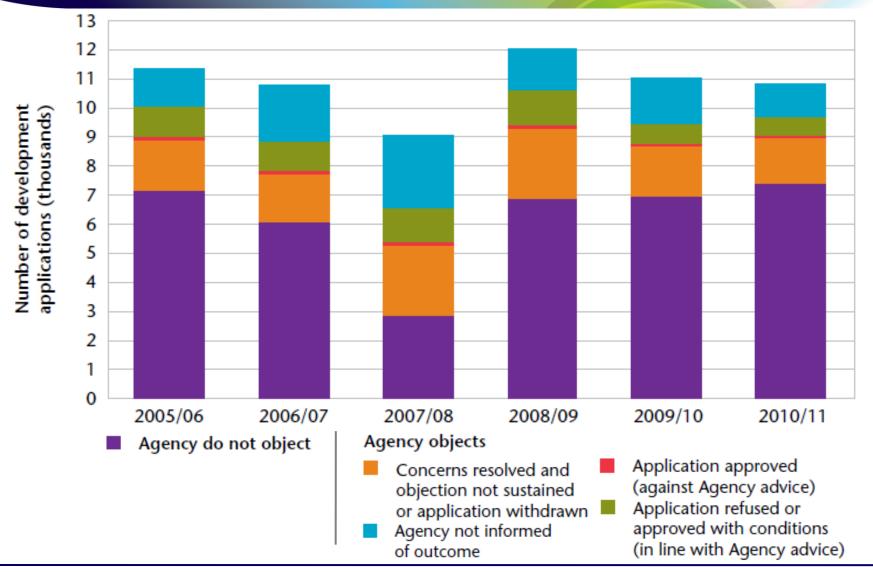
Over the last ten years, most floodplain development has been in areas protected by flood defences, but one-fifth has been in areas not protected





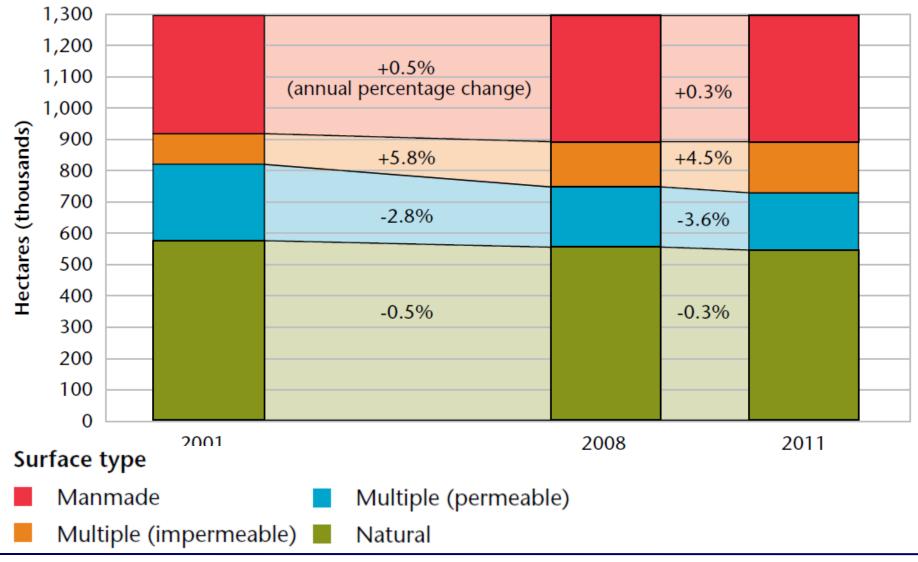
Floodplain development: generally designed to be resilient but EA not informed of outcome of one third of applications to which it objected





Area of hard surfacing increased in England's towns and cities over the past 10 years





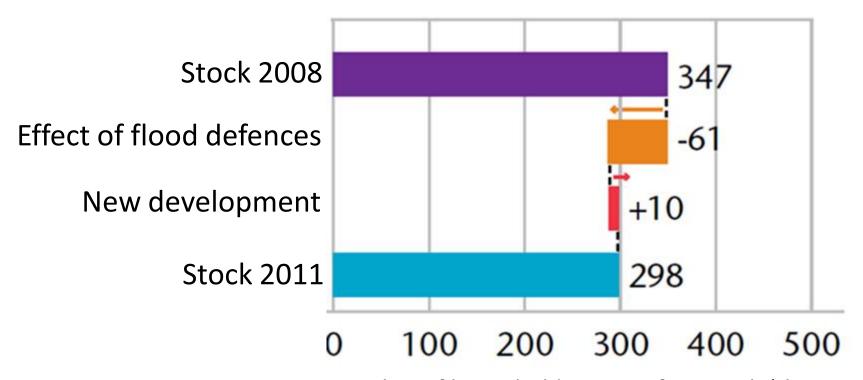
ASC recommendation: managing exposure to flooding



Government and local authorities should ensure more robust and transparent implementation of planning policy in relation to development in areas at risk of flooding

Investment in flood defences has reduced number of households at risk, including those at significant risk

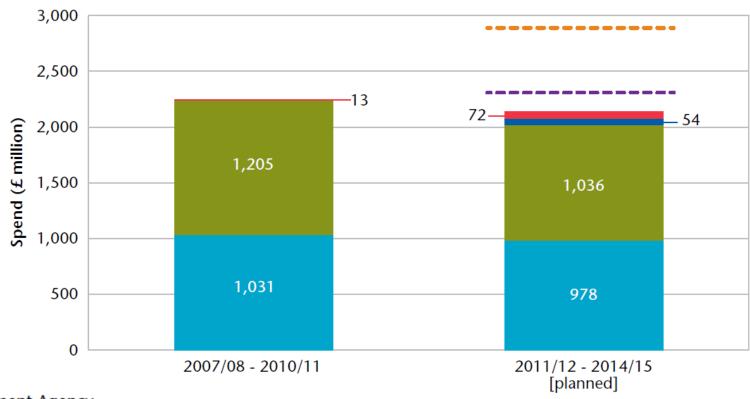




Number of households at significant risk (thousands) 2008/09 to 2010/11

Funding allocated in current spending review has fallen by 12% compared to last 4 years (in real terms)



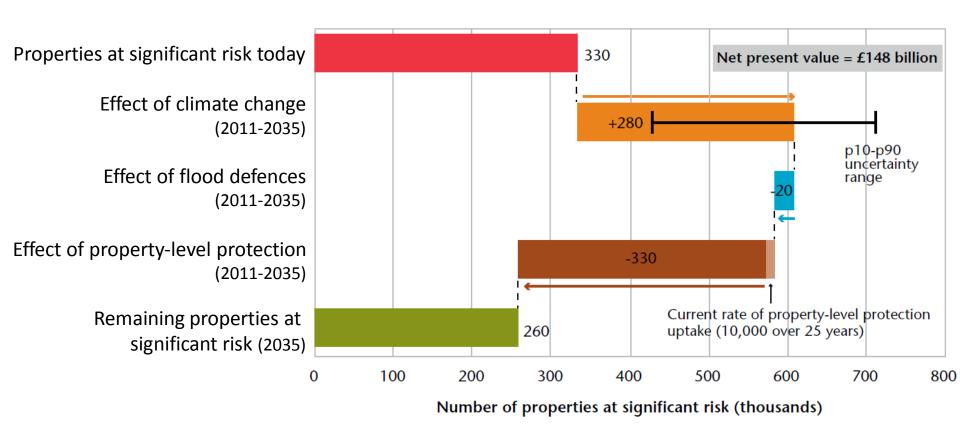


- Environment Agency revenue spend
- External contributions
- Effective spend from 15% efficiency savings on capital
- Environment Agency capital spend

- Investment Scenario A 2008/09 annual spending level held constant in cash terms.
- Investment Scenario B
 £20 million increase yearon-year on top of inflation.
 Keeps number of properties
 at significant risk constant.

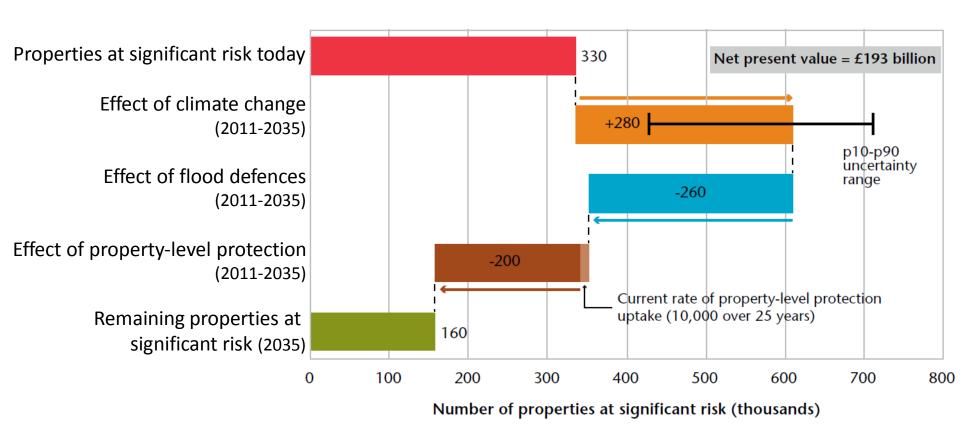
Property-level protection could benefit around 330,000 properties under a constrained investment scenario





Increasing investment in flood defences and propertylevel protection could lead to a four-fold reduction in risk by 2035, compared to no additional action





ASC recommendation: protecting existing properties from flooding

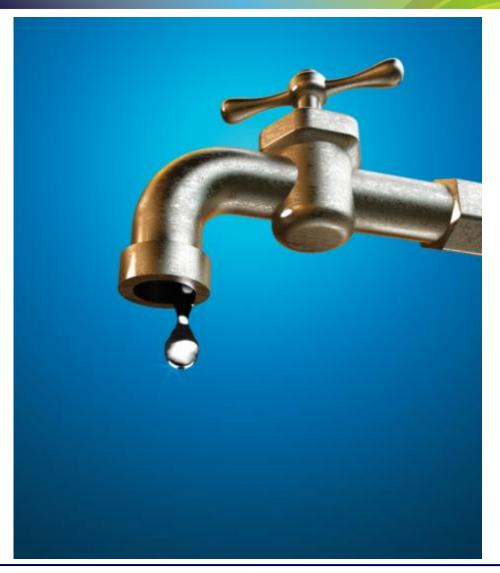


The Government should support sustained and increased investment in flood defences from public or private sources;

or in the absence of this identify ways to manage the social and economic consequences of more frequent flooding.

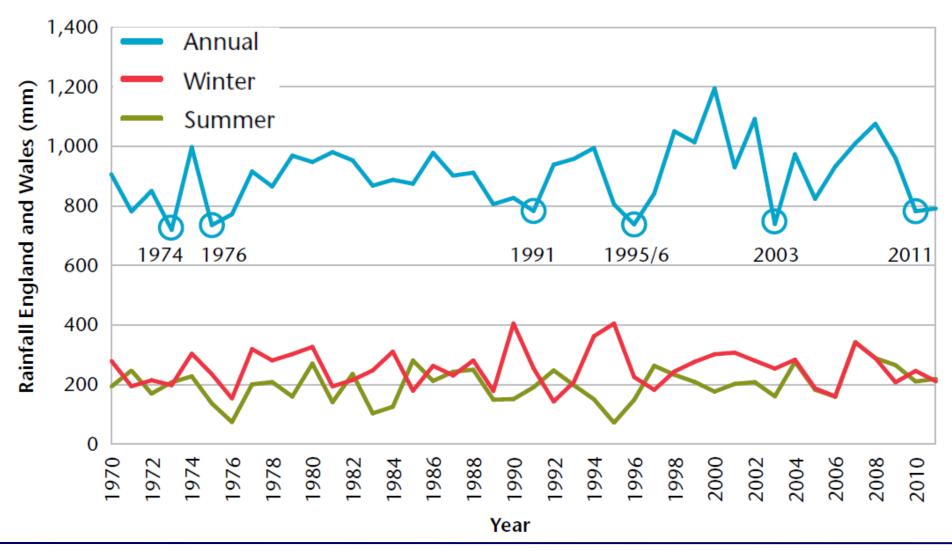
Water scarcity





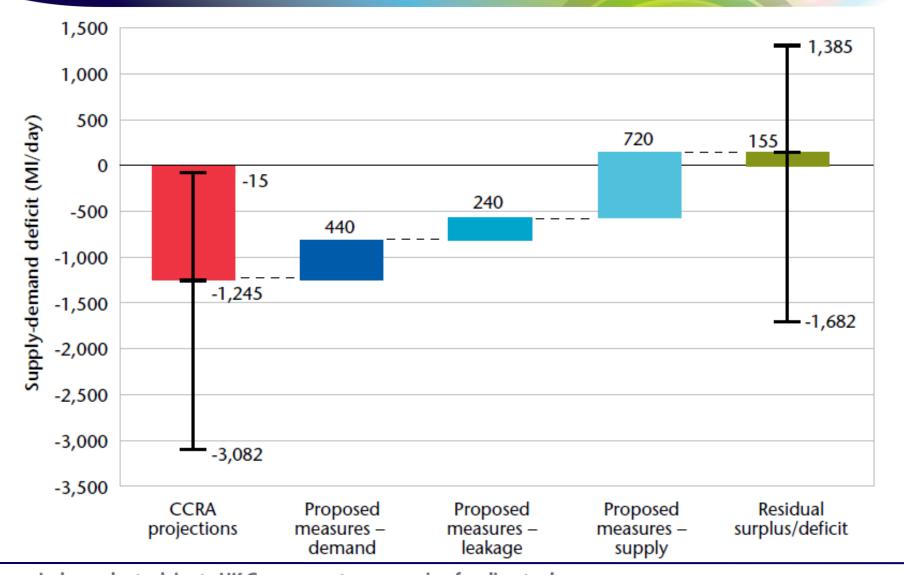
Droughts have occurred on average once every 7 years during the past four decades: they could become more frequent in the future





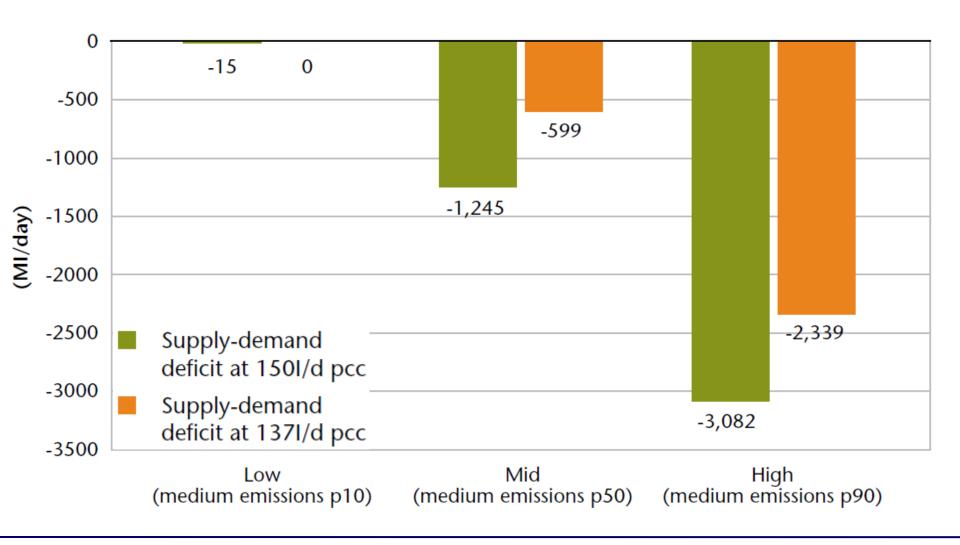
Water companies tend to focus their efforts on measures to improve supply, with the remainder on reducing consumer demand or limiting leakage





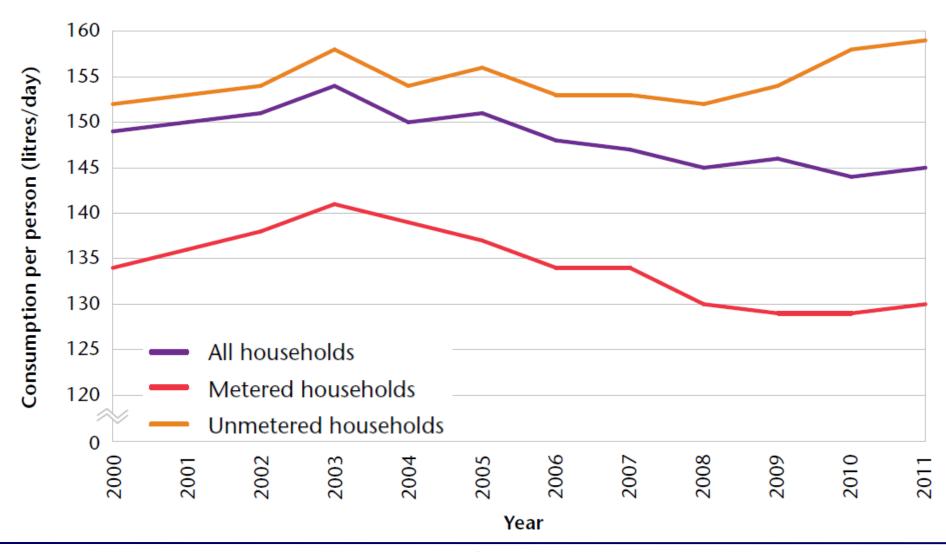
Reducing household water consumption by ~13 l/p/day could deal with half of the deficit under the medium emissions scenario





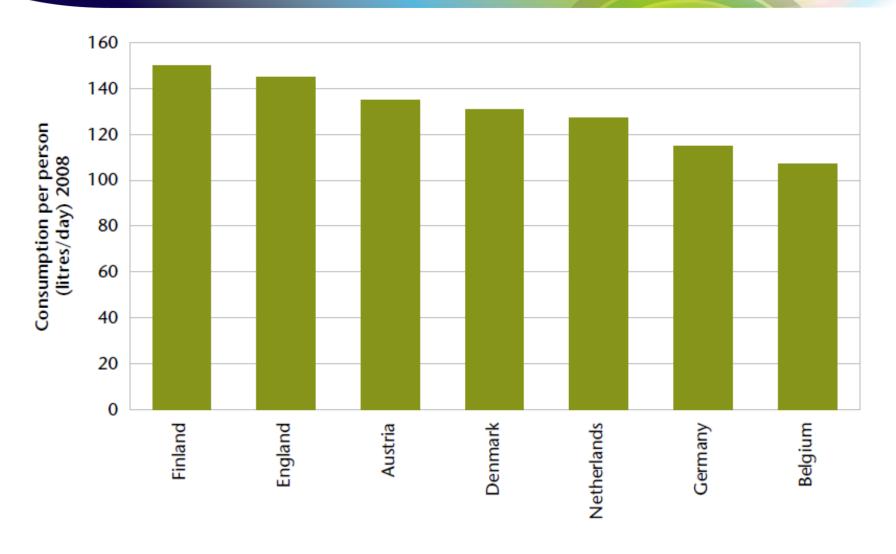
Water consumption per person continues to fall; this rate needs to be maintained in future





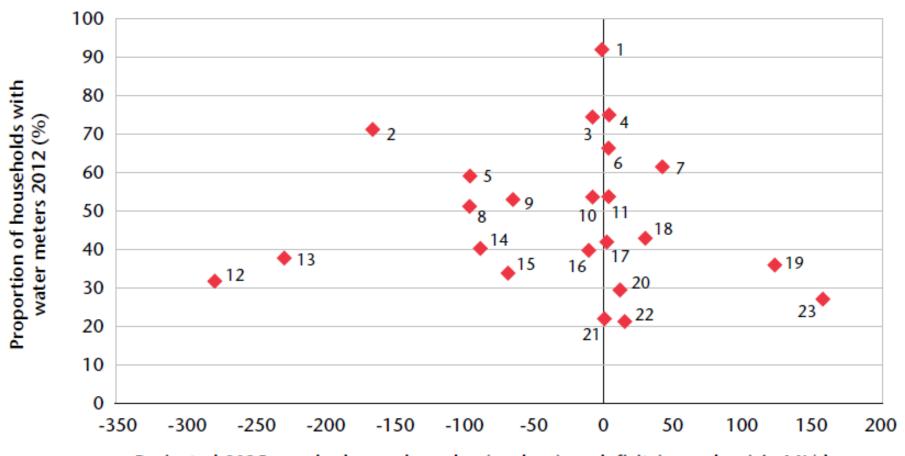
Experience of other countries suggests lower per person consumption is achievable





Metering should be targeted at areas most at risk from climate change, however this is currently not happening

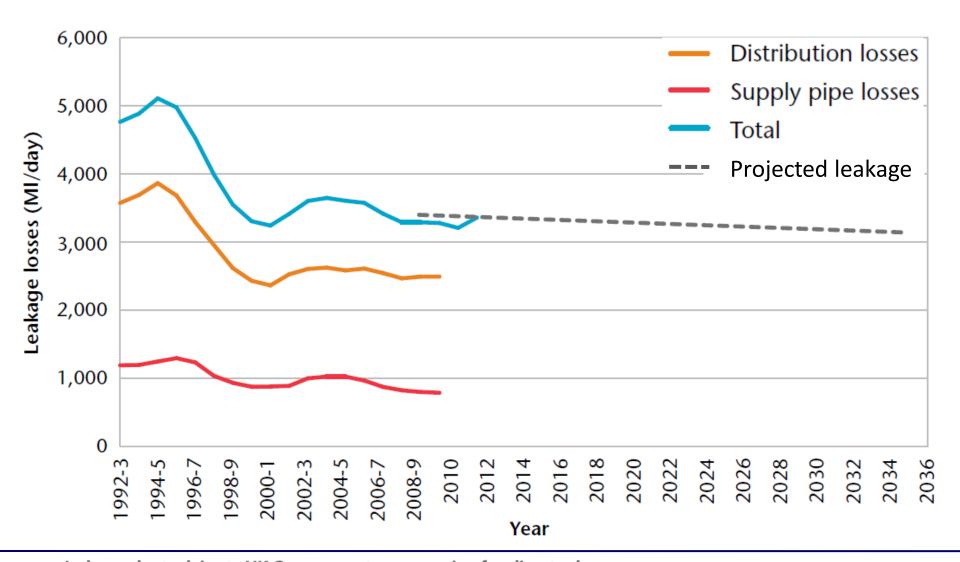




Projected 2035 supply-demand surplus (+values) or deficit (-ve values) in MI/day

Leakage rates fell sharply in the 1990s, but have since levelled off. With climate change further reductions may be economic







The Government and water companies should take further steps to increase efficiency in water use, including through water metering and pricing.



Adaptation Sub-Committee

http://www.theccc.org.uk













