Committee on Climate Change Adaptation

Challenges of a Changing Climate

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Adaptation Sub-Committee

24th September 2010

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Committee on Climate Change Adaptation

ASC established by the Climate Change Act 2008 to:

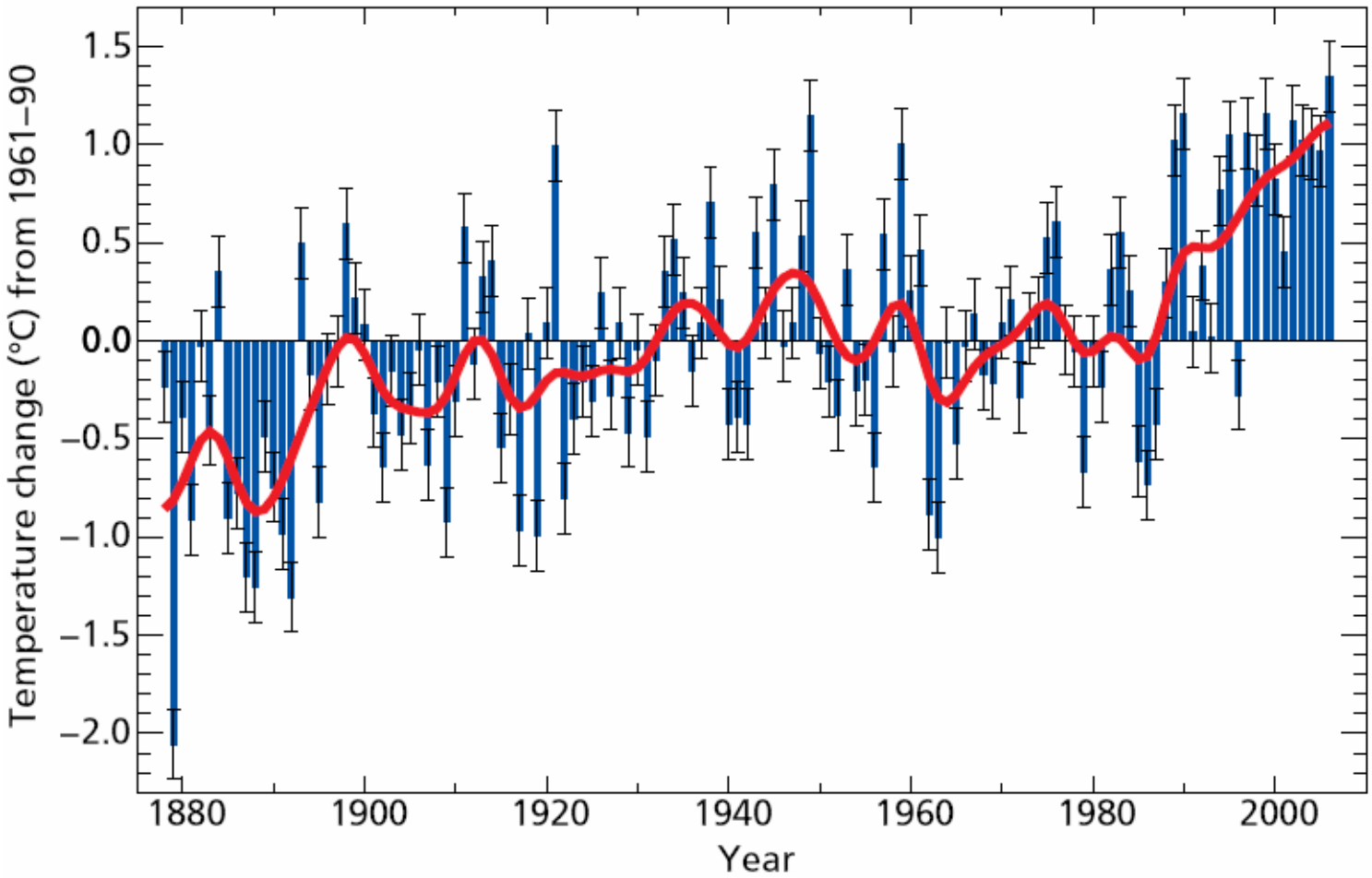
- Advise on the Climate Change Risk Assessment
- Assess progress in implementing the National Adaptation Programme

ASC's first report published in September 2010

1. Why do we need to adapt?
2. What should the UK be doing to adapt?
3. What progress has been made so far?
4. Next steps?

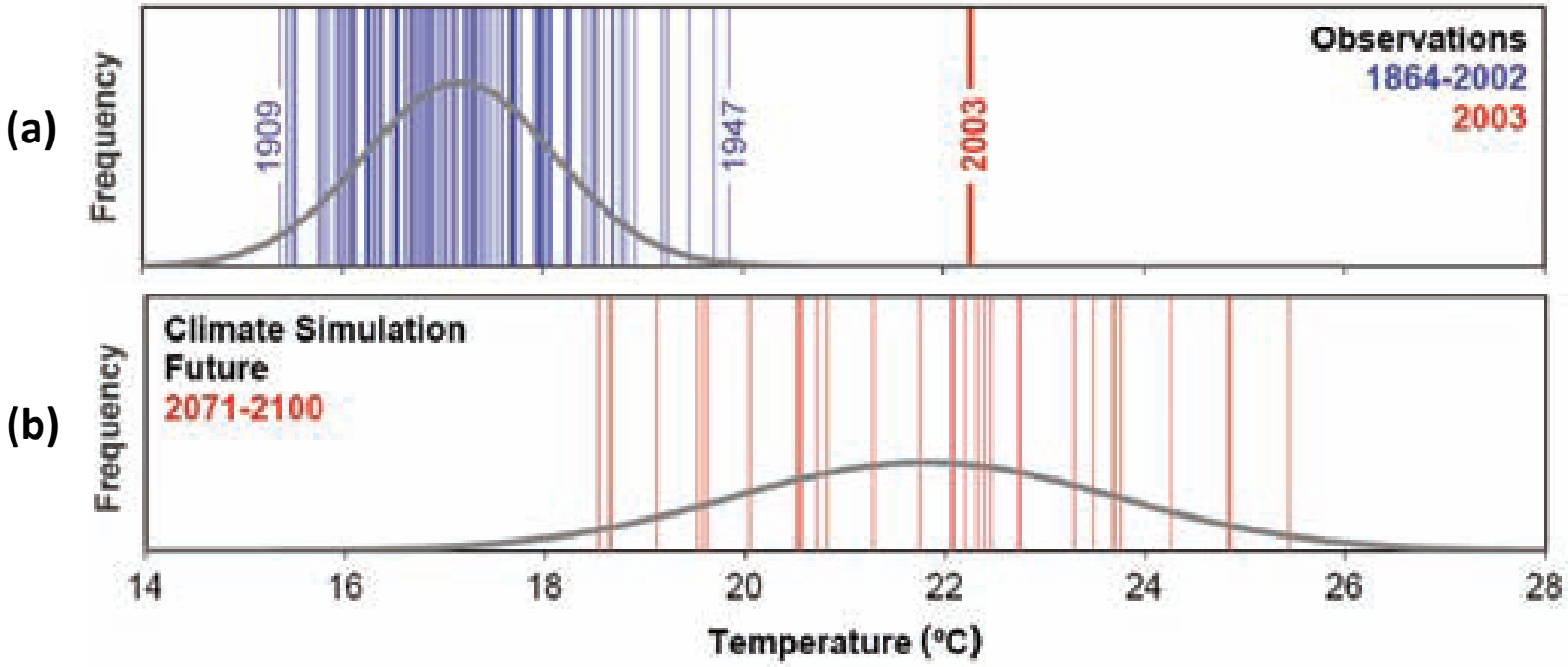
UK climate is already changing

Central England Temperature: 1°C rise in 40 years



Why do we need to adapt?

Events like the 2003 European heatwave are likely to become the norm by the end of this century (under a medium emissions scenario)



(a) Observations in Switzerland 1864 - 2002

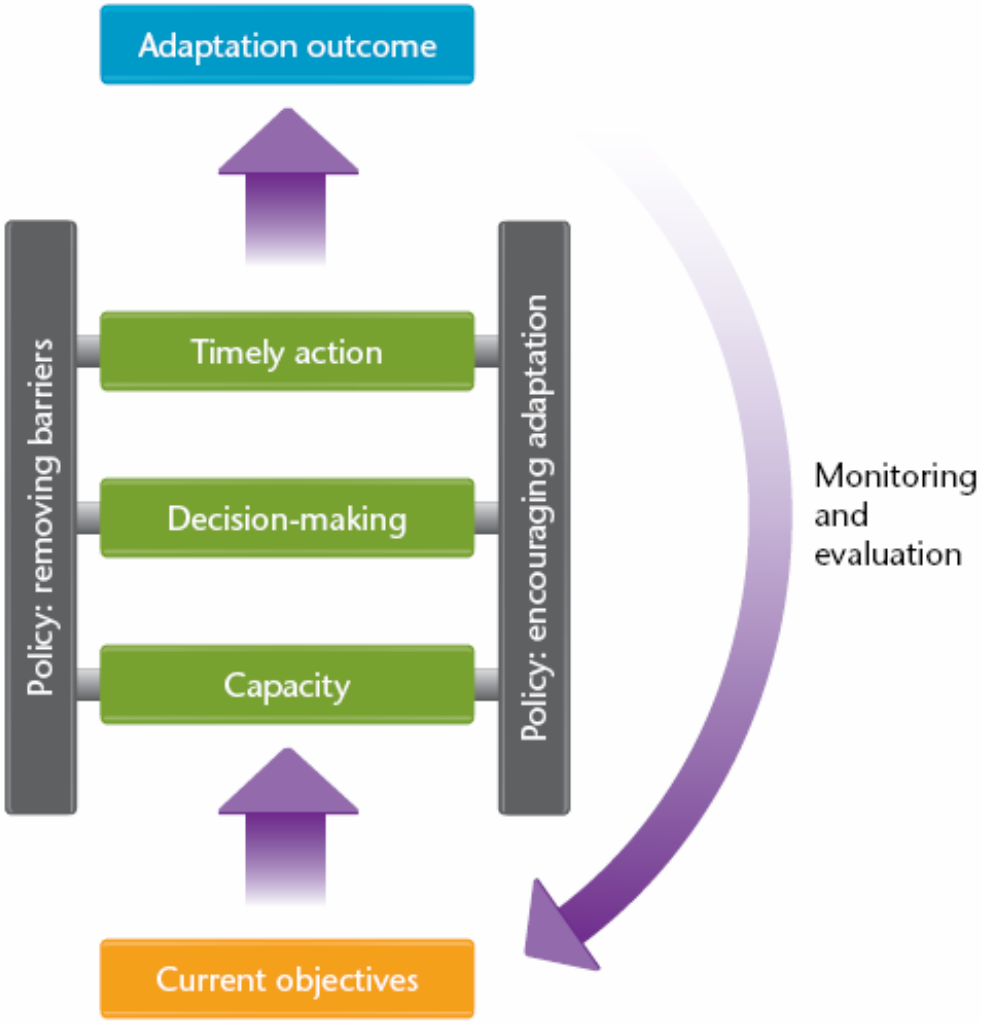
(b) Model simulation 2071 – 2100

Adapted from Schar et al. (2004)

Five priority areas for adaptation

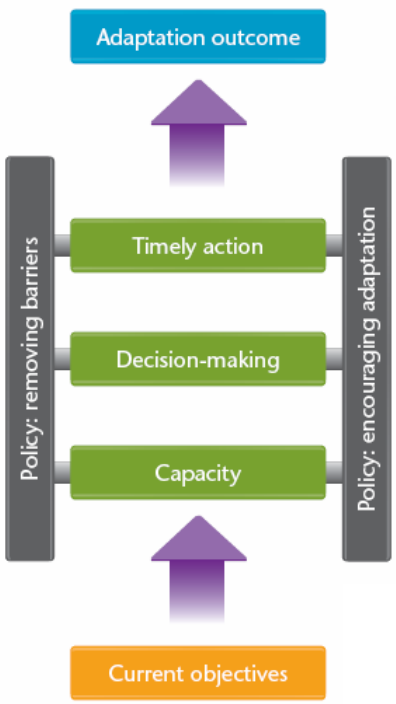
		Long lasting consequences		
	Climate sensitive decisions	Long asset life	Irreversible impacts	Systemic consequences
Land use planning	X	X	X	X
Providing national infrastructure	X	X		X
Designing and renovating buildings	X	X		
Managing natural resources	X		X	X
Emergency planning	X			X

Adaptation preparedness ladder



- Desired adaptation outcomes
- Delivery of outcomes
- Policy to enable delivery

What progress has been made so far?



- Adaptation outcomes **not being defined**

- Many organisations are **building capacity**
- Some organisations are including **climate risks in decisions**
- Limited evidence **that low-regrets measures** are being systematically implemented

- Number of barriers to adaptation identified

What sort of adaptation actions?

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ASC report identified 2 categories of adaptation action

Low-regrets measures

- **Reduce current vulnerability** – e.g. Peat restoration
- **Have co-benefits for non-climate risks** – e.g. Water conservation

Detailed options appraisal

- **Robust options** – e.g. Major new water infrastructure
- **Flexible options** – e.g. Build flood defences with broader foundations to allow retrofit

Water resources

Risks:

- Supply/demand balance
- Water quality

Drivers of risk:

- Reduced groundwater re-charge
- Low flow rivers (compounding pollution)
- Abstraction exceeding environmental limits
- Increasing demand
- Cost and feasibility of water clean-up

Water resources – adaptation responses

Progress: policy questions

- Water industry catchment management schemes
- 25 year Water Resource Management Plans
- River Basin Management Plans
- Progress tackling diffuse pollution
- Efficiency of water use and 'best' use of water
- Land use
- Quality of information: fit for purpose

Flooding & coastal erosion

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Risks:

- Flood risk
- Coastal erosion

Drivers of risk:

- Increase in storm frequency and extremity
- Sea level rise
- Development in the floodplain
- Increase in impermeable surfaces
- Cost of hard defences: ££s + potential knock-on consequences
- Politics of risk management

Flood risk & coastal erosion – adaptation responses

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Progress: policy questions

- Shoreline Management Plans and Catchment Flood Management Plans
- Land use planning: development control
- Strategic land use planning
- Emergency planning responses

Looking ahead – adaptation policy framework

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Adaptation Reporting Power (1st round)	2011
ASC's 2nd report	July 2011
Climate Change Risk Assessment	Jan 2012
Adaptation Economic Assessment	Mid 2012
National Adaptation Programme	2012
ASC's 3rd report	July 2012
ASC's statutory report on progress in implementing NAP	July 2014

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http://www.theccc.org.uk