Measuring progress on adaptation

Kathryn Humphrey, Committee on Climate Change

Presentation for the ARCC Network Assembly, 10th June 2014

The Adaptation Sub-Committee

Statutory roles:

- **To provide advice to Government** on the Climate Change Risk Assessment (advisory role)
- **To report to Parliament on progress** towards adaptation (scrutiny role)

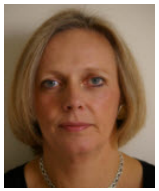
Prof Lord John Krebs (chair)

Sir Graham Wynne

Prof Sam Fankhauser

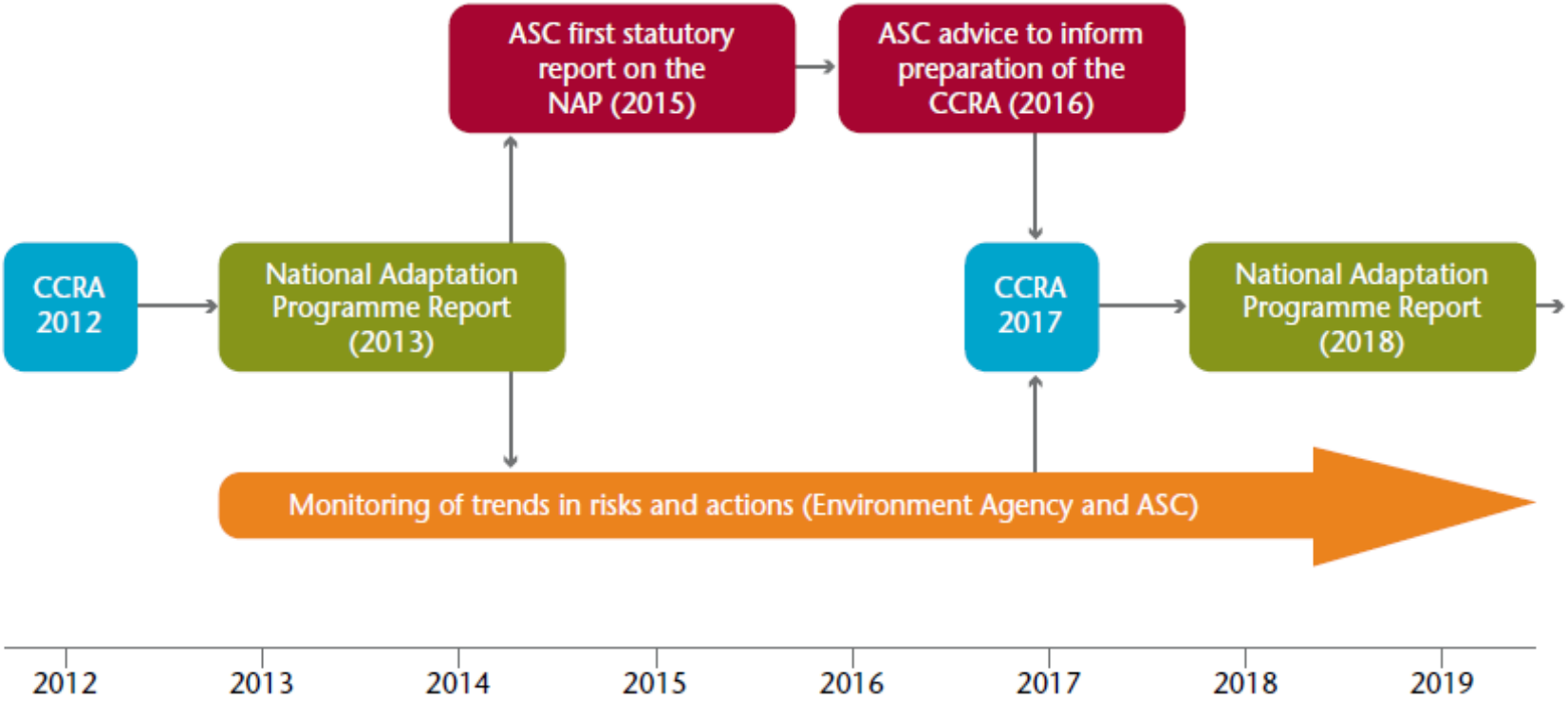
Prof Martin Parry

Prof Jim Hall



Prof Dame Anne Johnson

Climate Change Act established 5 year cycle of risk assessments followed by policy response



3

Measuring progress in adaptation is challenging

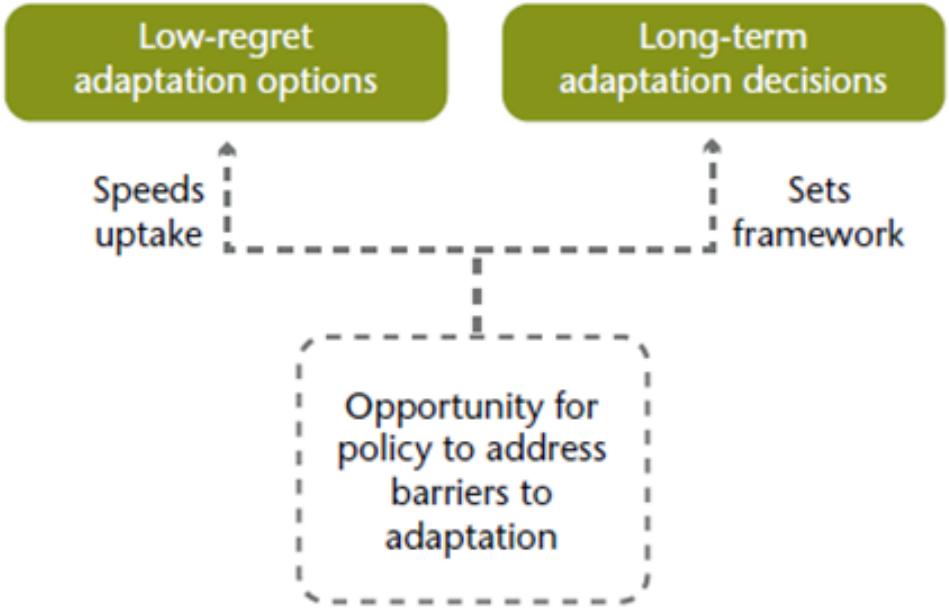
	Mitigation	Adaptation
Targets and metrics	Clear national target: 80% by 2050. Standard metric exists to measure progress across all sectors (carbon emissions).	No national-level targets. No standard metric across sectors. National-level data is lacking in many areas.
Uncertainty	Most emission sources identified, being monitored & addressed.	Uncertainty in climate projections – large range of possible futures makes economic analysis difficult. Not all risks understood.
Context	Global atmosphere.	Climate impacts are national, regional and local.

4

ASC adaptation assessment toolkit – what is happening, and what is the scope to do more?

Indicator framework

Decision-making analysis



Source: ASC (2012)

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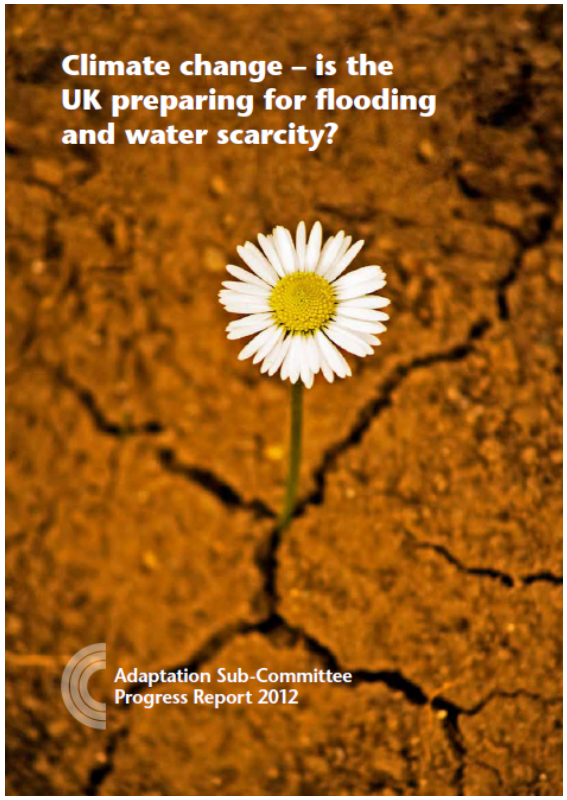
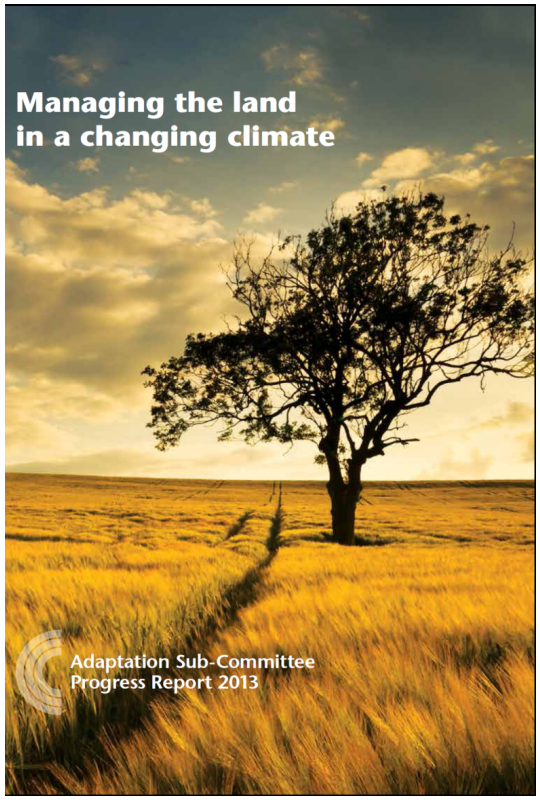
ASC progress report series – will feed in to our first report to Parliament in July 2015

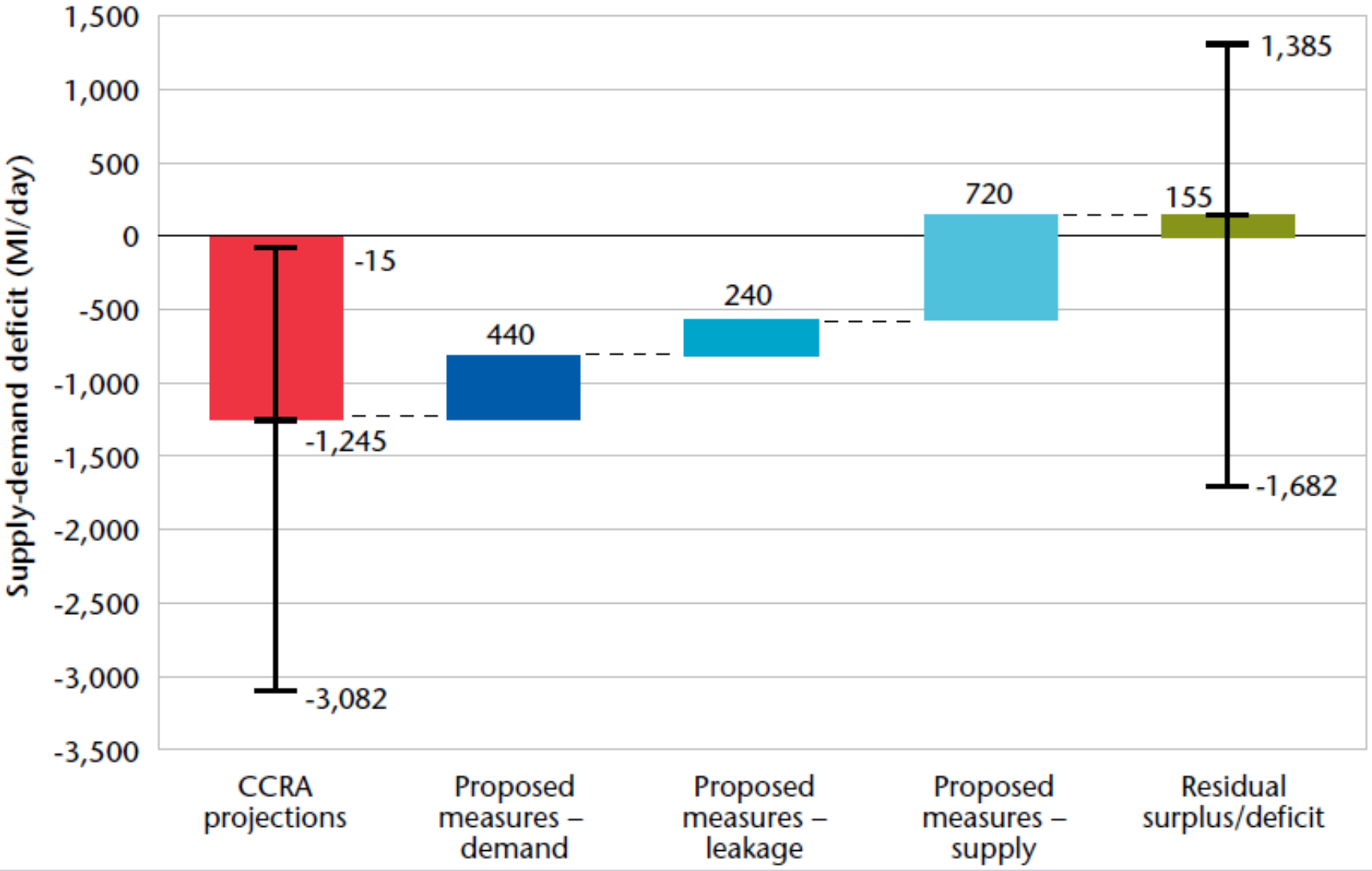




Publication on 9th July 2014

http://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/how-the-uk-is-preparing/

Using indicators to assess residual risk – water availability for public water supply



Source: ASC (2012)

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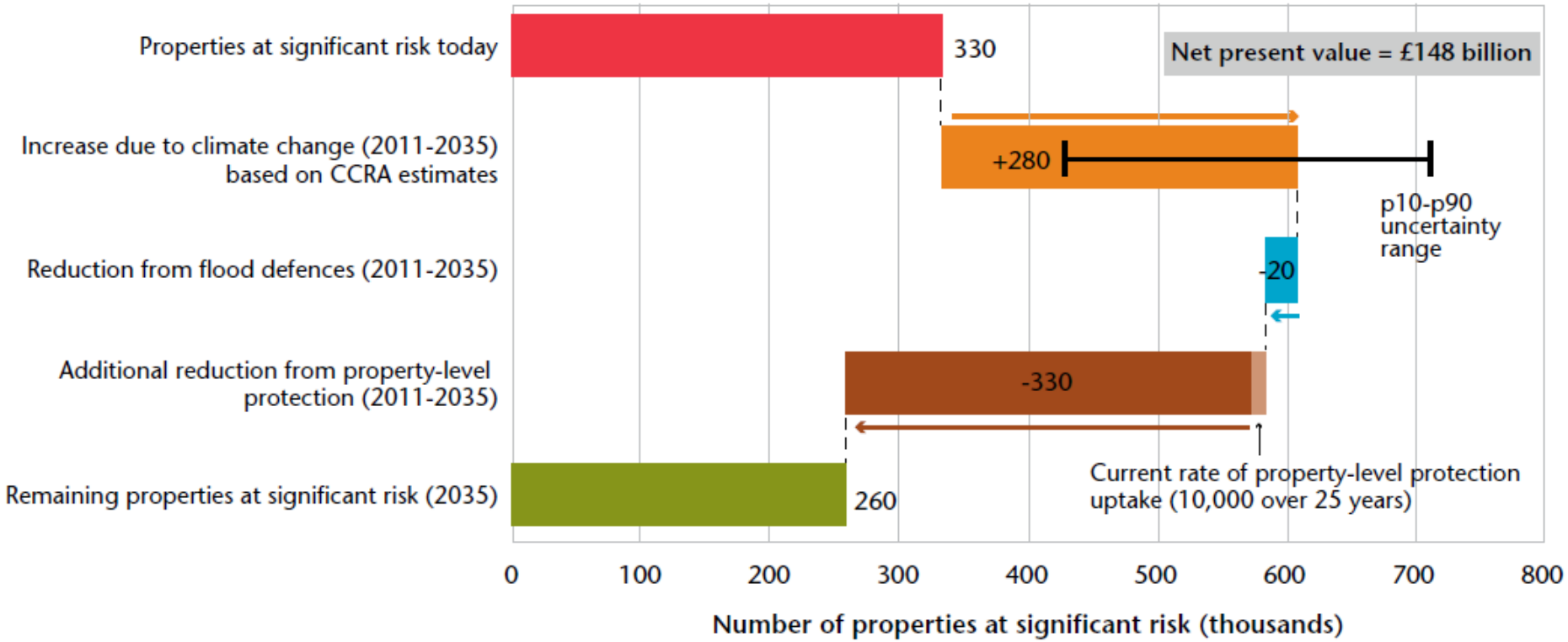
Using indicators to assess residual risk – flood defence spending



Flood defence spending would need to increase by £20million each year to keep flood risk level constant under a medium risk level from climate change. Property level defences help particularly in areas where defences are not cost-beneficial.

Source: ASC (2012)

8

Many indicators are needed to build a picture of action across a whole sector – consultation in July 2014 on NAP indicators

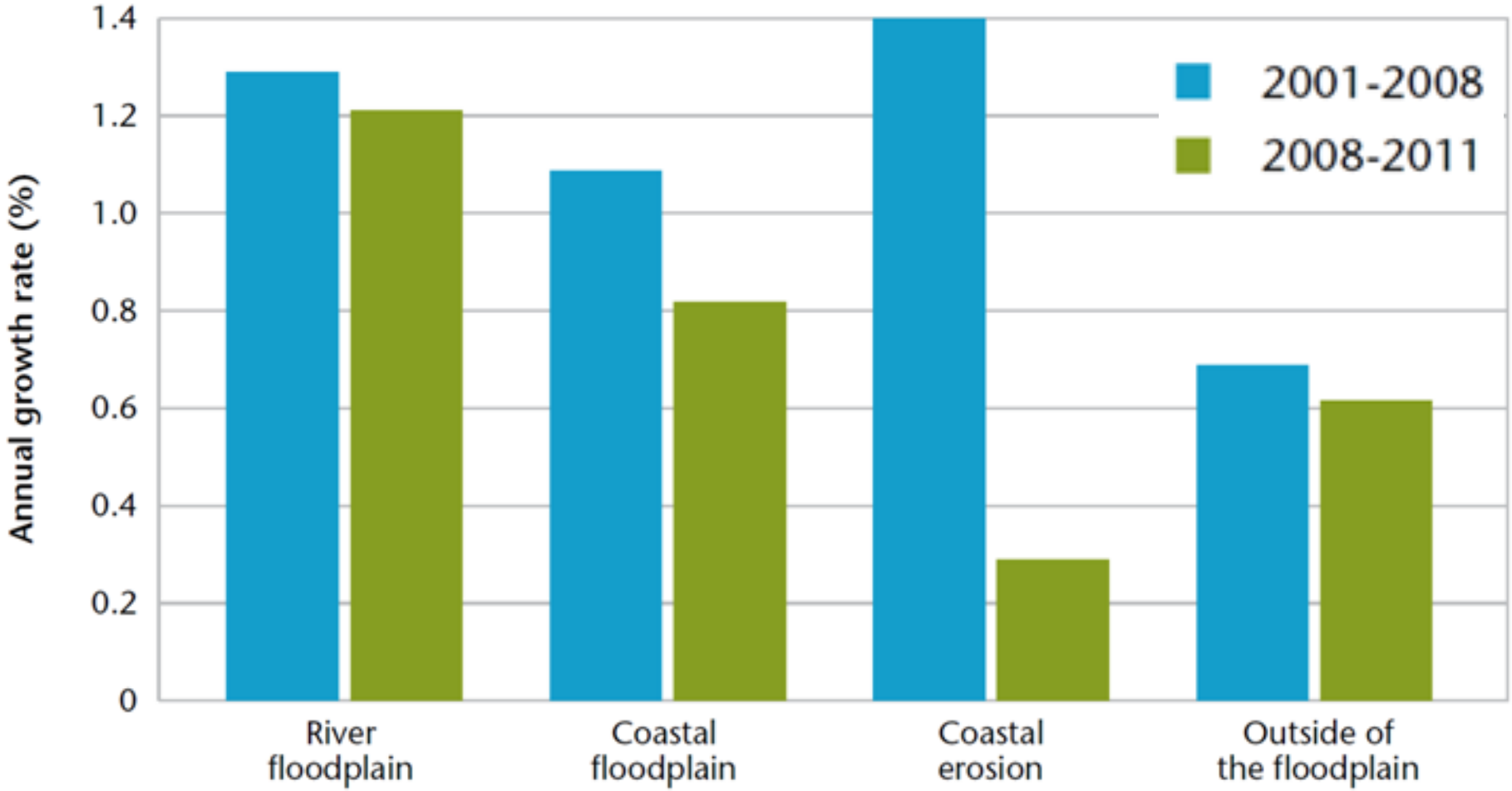
Flooding indicators

Name	Direction of trend	Implication of trend
Development in areas at significant flood risk (unprotected or poorly protected)	↑	
Planning applications approved by local authorities despite Environment Agency flood objection	↓	
Paved-over surfaces in urban areas	↑	
Investment in flood defences	→	

Note on arrows: the direction of the arrow depicts the trend in that indicator (increasing, decreasing or no significant trend). The colour of the column assesses the implication for the level of risk (red = increasing risk; green = decreasing risk; yellow = risk is neither increasing nor decreasing). **Further information** is available in the Chapter 2 of the Adaptation Sub-Committee 2012 report.

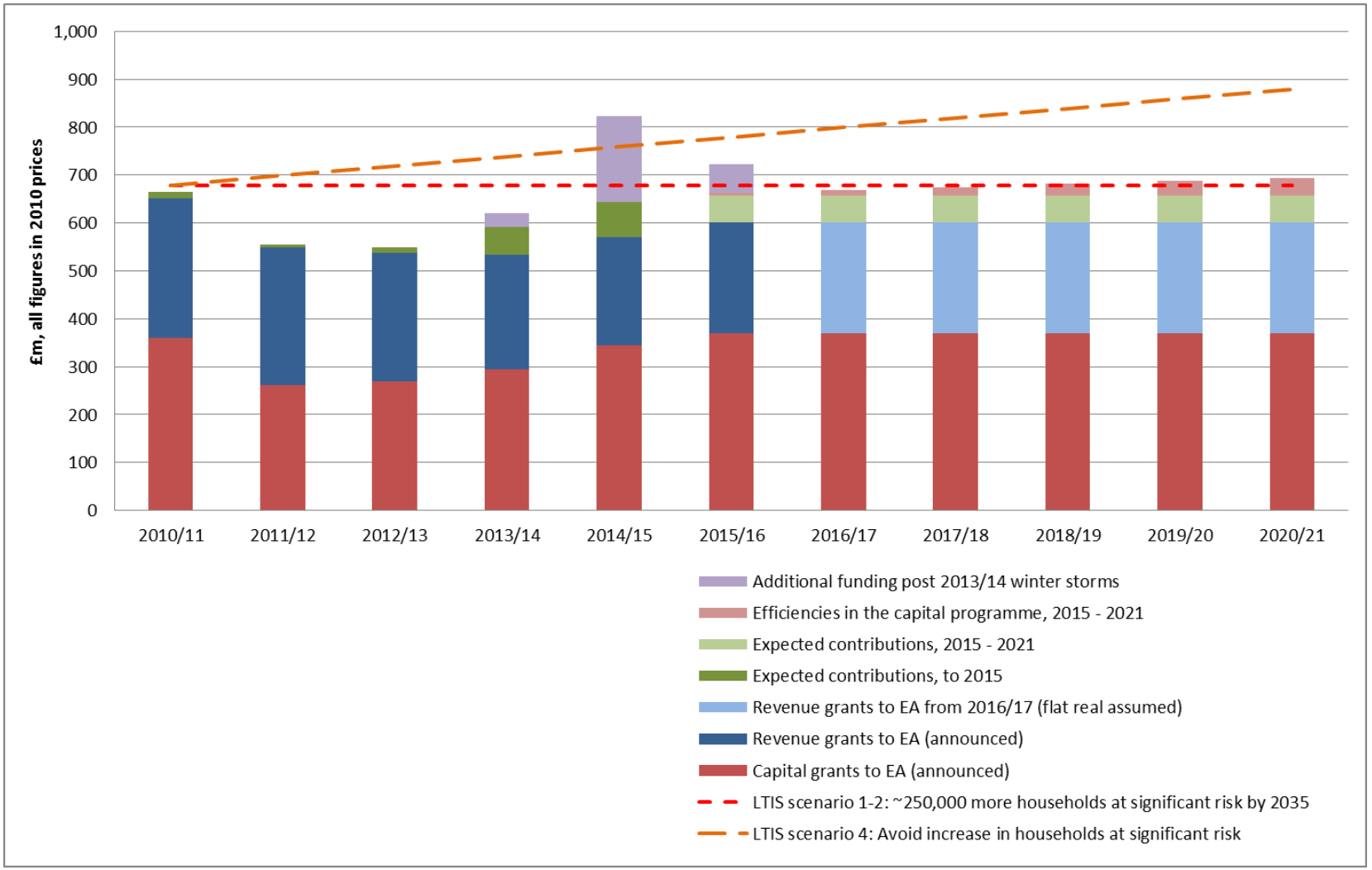
Source: ASC (2012)

Decision making - development in areas of flood risk is happening faster than elsewhere

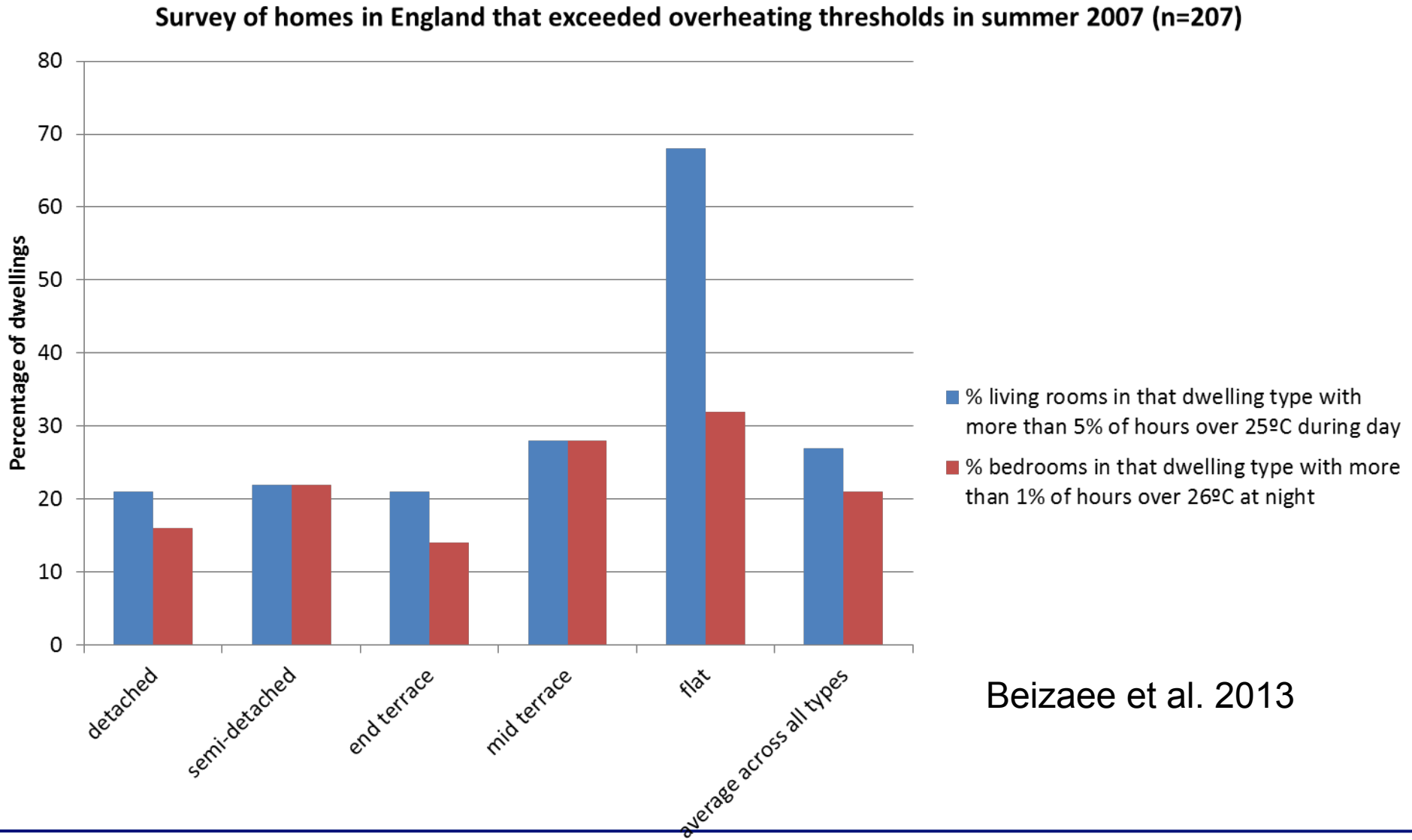


Source: ASC (2012)

Decision making - despite short-term funding boost, future investment levels are set to remain below previous assessments of need (LTIS, Foresight, Pitt Review)

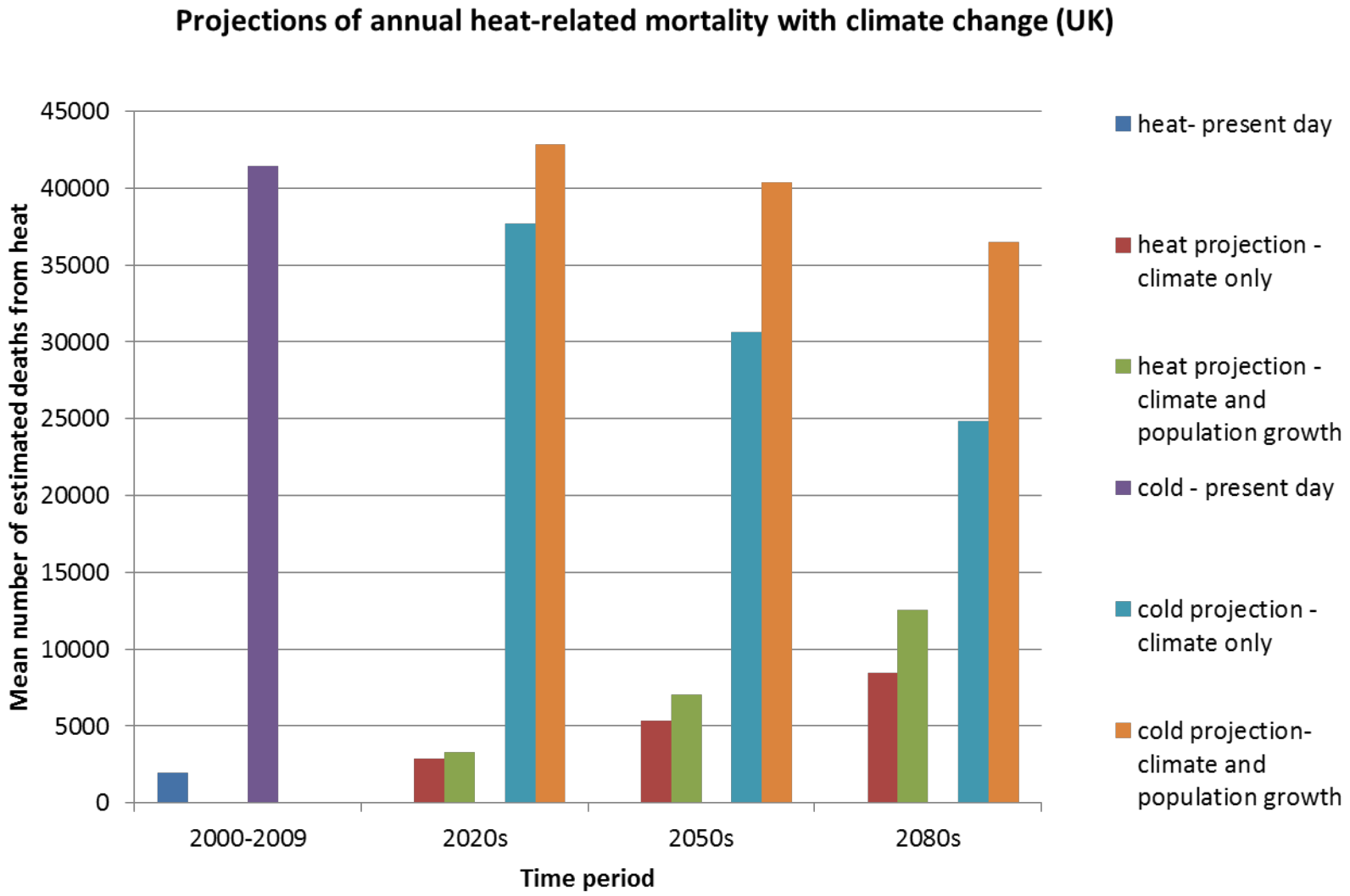


Around 20% of 207 homes surveyed exceeded (static) overheating thresholds in summer 2007 (a cool summer).

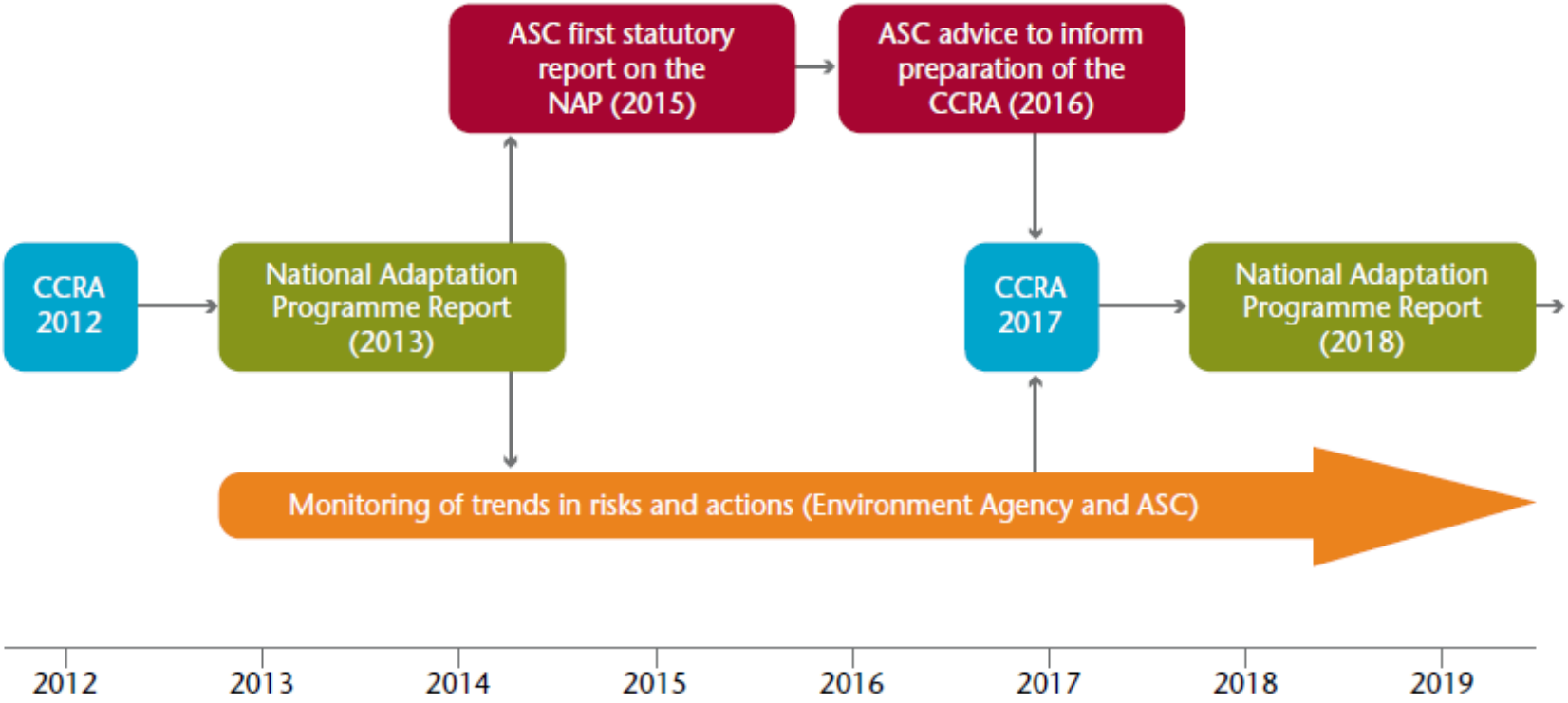


Beizaee et al. 2013

Exposure to heat is likely to increase with climate change; vulnerability is also increasing (not shown here)



ASC's second role is to provide advice (not scrutiny) on the Climate Change Risk Assessment. For 2017, we will produce an independent evidence report.



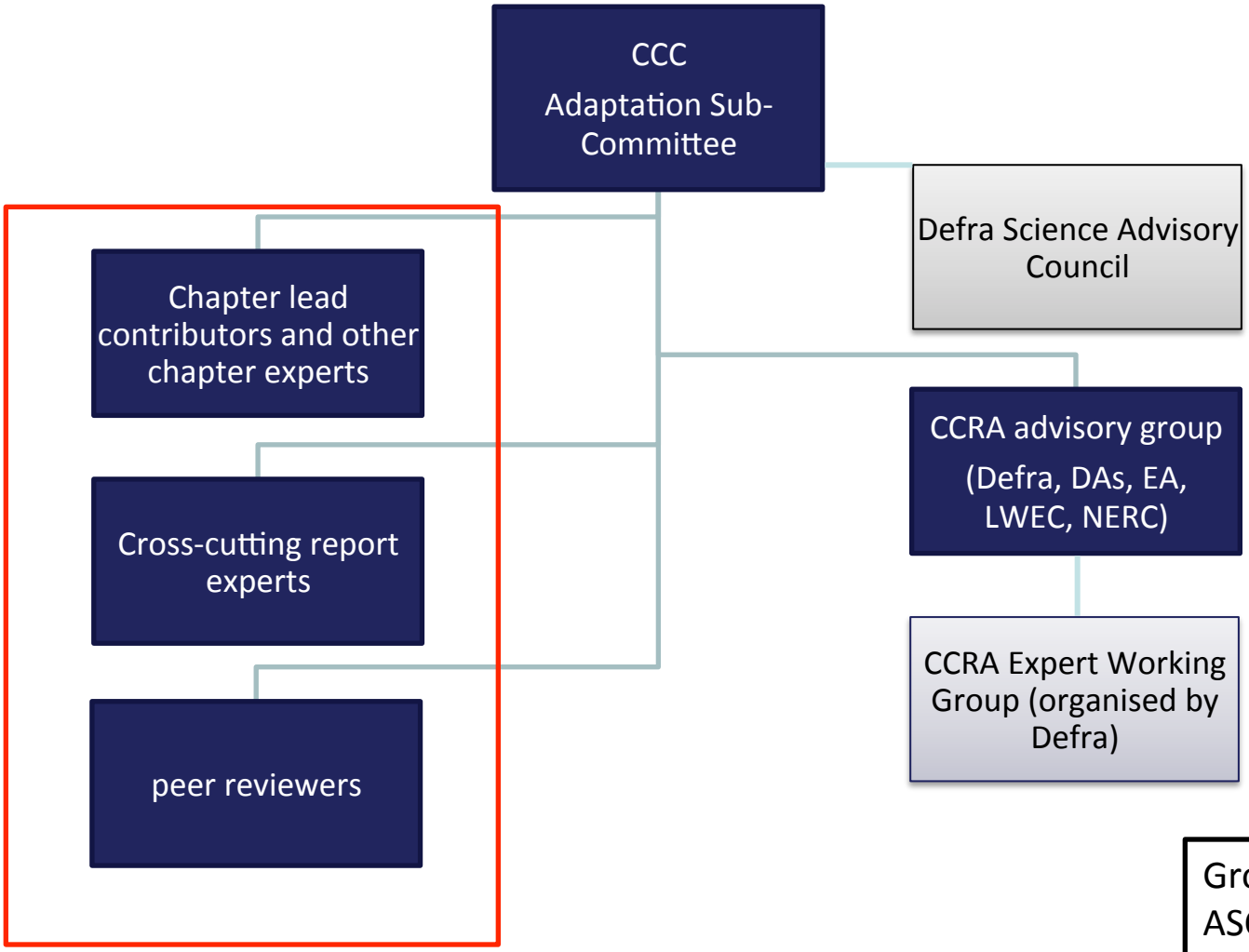
Comparison of evidence reports- 2012 and 2017 CCRAs

CCRA2012	CCRA2017
100+ threats and opportunities	Smaller number of threats/opportunities
Scored risks by magnitude, urgency and confidence	Will keep same scoring and add importance of climate change as a driver of change
2020s, 2050s and 2080s	Current, 2020s (2050s and 2080s)
Mix of existing data and new analysis	Mostly synthesis of existing analysis
Used UKCP09 to explore different climate scenarios	Will use evidence that is based on UKCP09 and other approaches
Did not include effects of planned adaptation or socio-economic change (beyond population growth)	Will include an assessment of the effects of adaptation and socio-economic change on risk.
Did not quantify international effects	Will include a chapter on international effects.
11 sector reports + 1 synthesis	1 evidence report
Authored by consultants (signed off by Defra)	Authored and signed off by ASC
Independently peer reviewed	Independently peer reviewed

CCRA 2017 draft chapter structure and lead contributors (will help ASC to draft chapters)

Chapter 1- **Executive Summary/ Introduction**
Chapter 2- **Characterising the future** (Rachel Warren, UEA)
Chapter 3- **The rural economy and natural environment** (Iain Brown, James Hutton Institute)
Chapter 4- **Infrastructure** (Richard Dawson, Newcastle University)
Chapter 5- **People and the built environment** (Sari Kovats, LSHTM and Dan Osborn, UCL)
Chapter 6- **Business and industry** (Swenja Surminski, LSE)
Chapter 7- **Global security** (Neil Adger, Exeter University and Andy Challinor, Leeds University)
Chapter 8- **Cross-cutting issues** (Roger Street, UKCIP)
Chapter 9- **Conclusions**

Governance for CCRA 2017 – where you can input



Groups managed through ASC in dark blue, groups managed through Defra in light blue.

Adaptation Sub-Committee

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