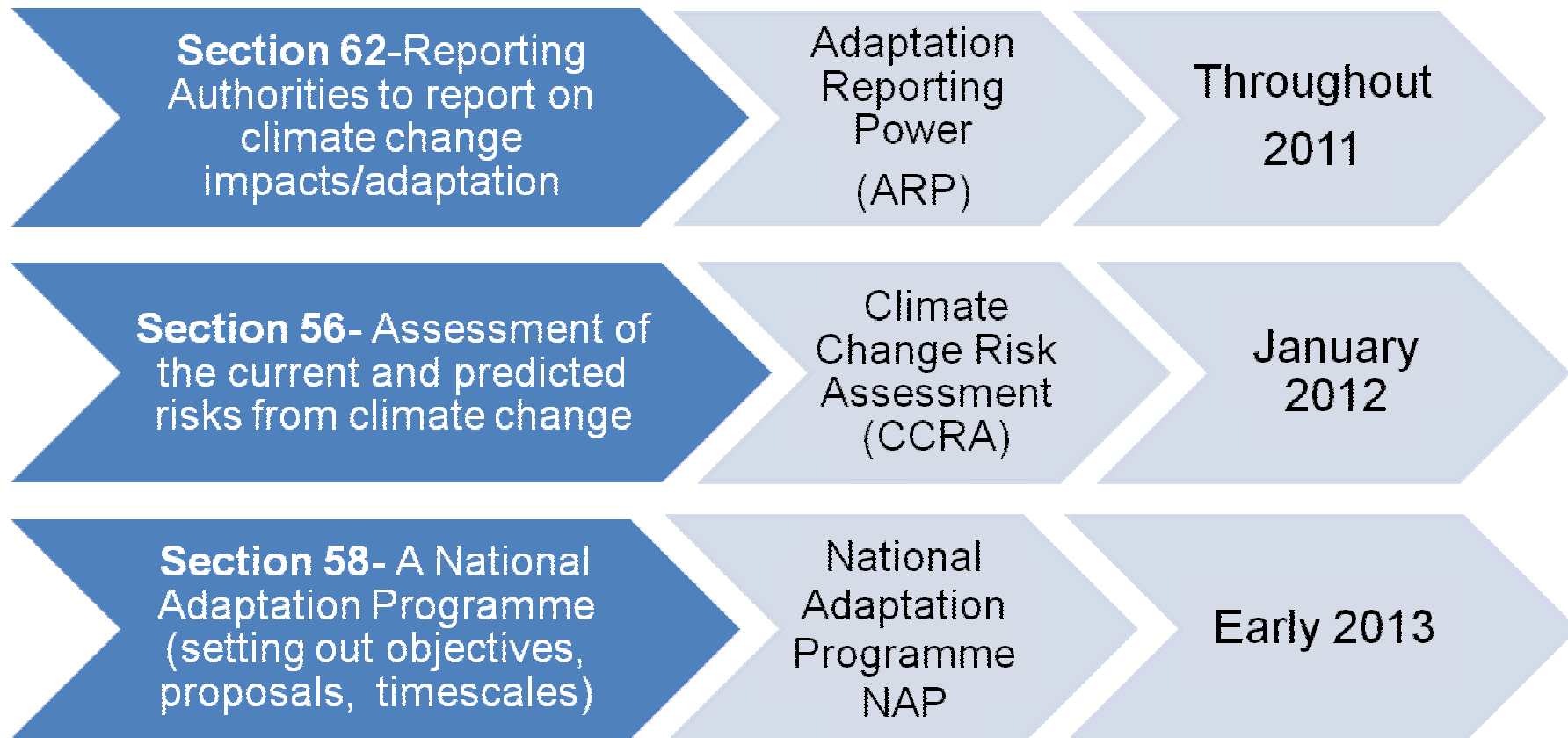


Climate Change Risk Assessment (CCRA)

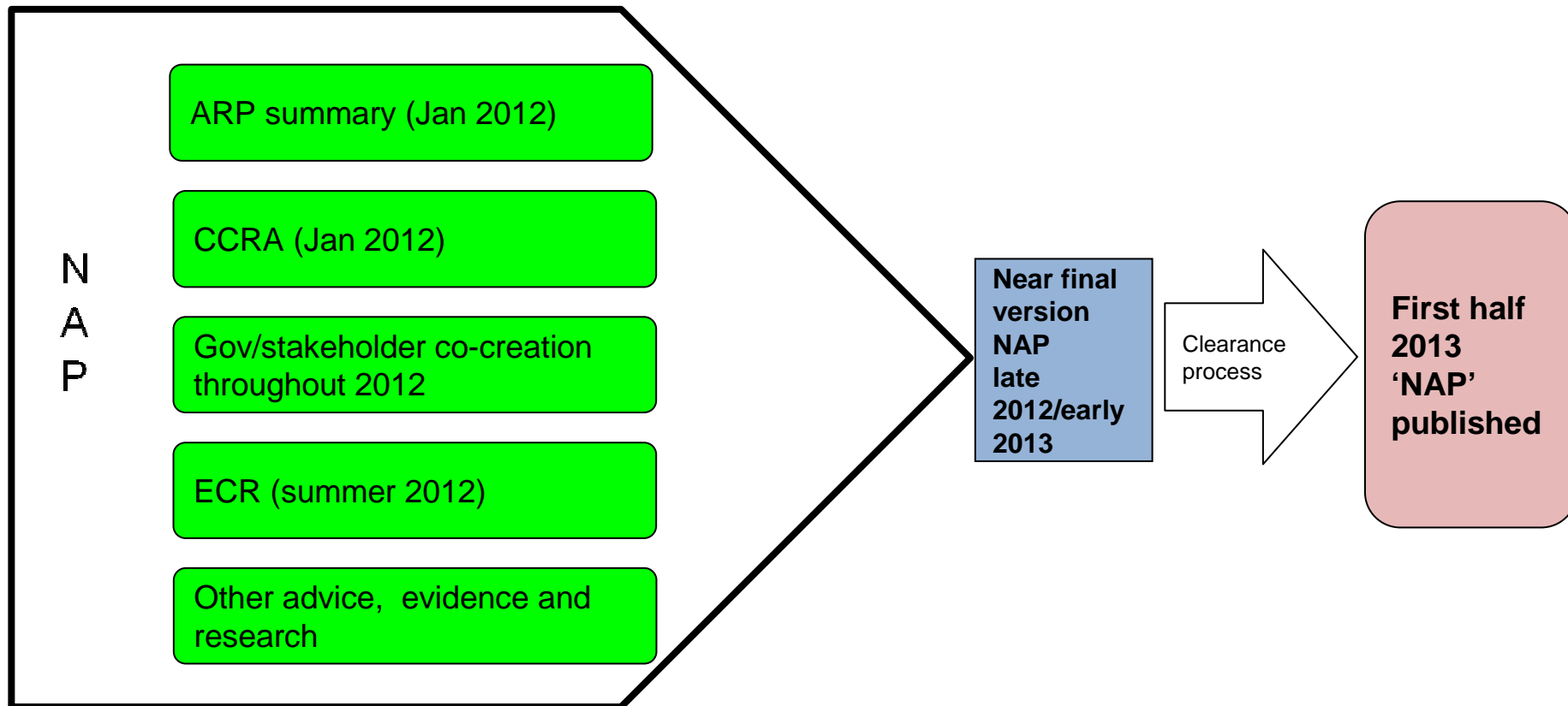
**Jonathan Capstick
Adapting to Climate Change Programme,
Defra**

Climate Change Act 2008

Legislative framework set for meeting mitigations targets, as well as setting out requirements for a National Adaptation Programme as follows:



High-level process for NAP development



The Climate Change Risk Assessment - Outline

Purpose

- Statutory requirement (Climate Change Act 2008)
- Develop practical method to compare disparate risks
- Provide evidence to support development of policies on adaptation (in combination with economic assessment of options).

Coverage

- Assess risks & opportunities of climate change to UK-current, and future up to 2080
- Land and marine, range of sectors and geographical areas.

Context

- Supports risk-based policy making
- First in a 5 year cycle
- Repeatable/transferable methodology

Sectors being assessed

Eleven Sector Reports on....

Eleven sectors (for initial analysis)

Health
Energy
Transport
Built Environment
Business
Agriculture
Forestry
Water
Flood and coastal erosion
Fisheries / marine
Biodiversity

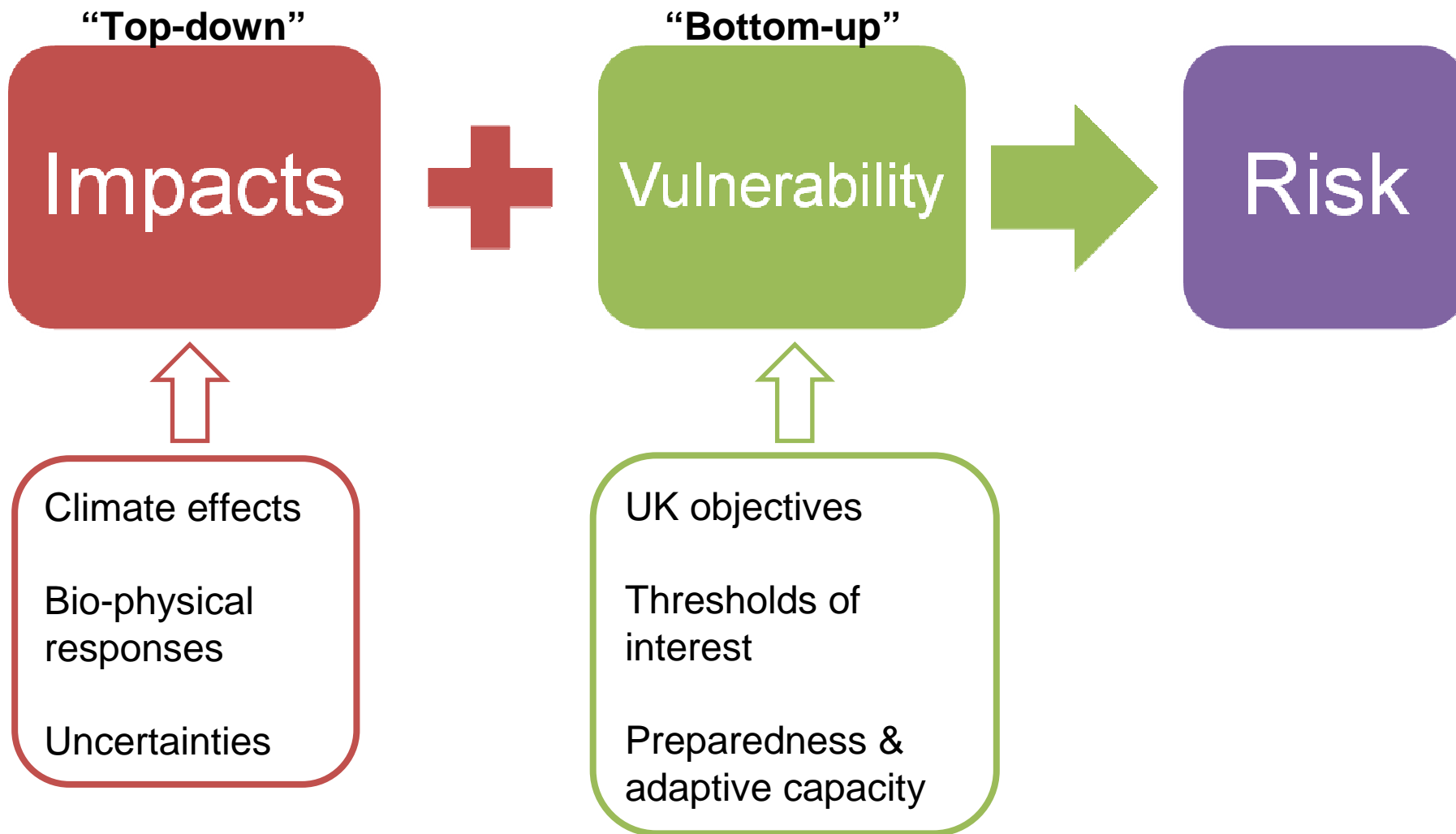
Also considered within these sectors: international impacts; emergency services; socially vulnerable groups.

One Synthesis Report on.....

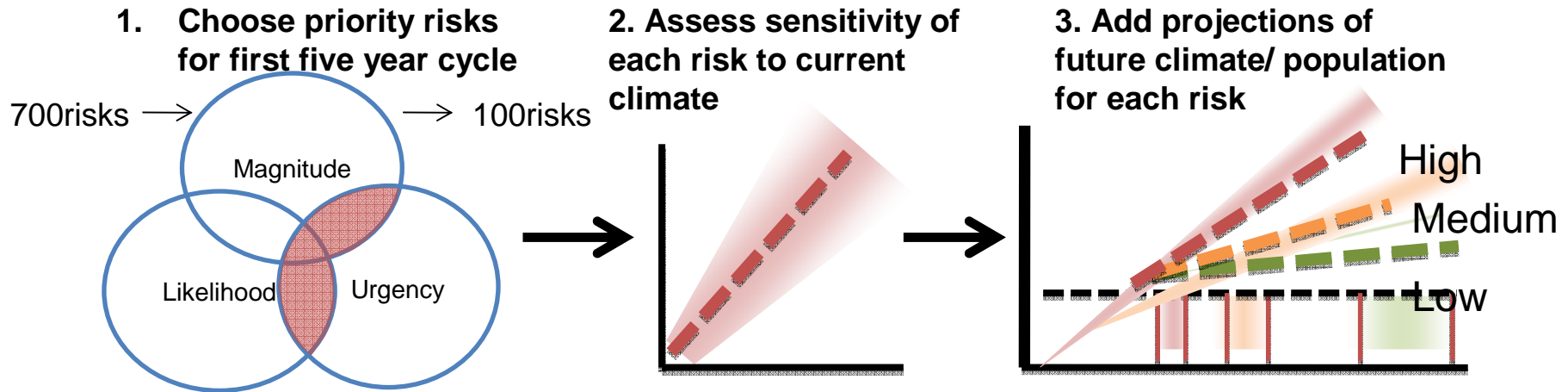
CCRA Themes (for Synthesis)

Health and Wellbeing
Natural Environment
Business
Agriculture and Forestry
Buildings and Infrastructure

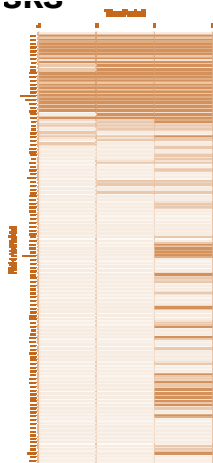
CCRA Dual Approach



CCRA Method in Brief



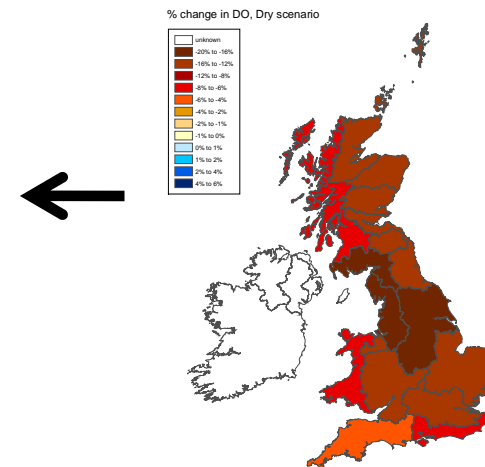
6. Compare scores of all risks



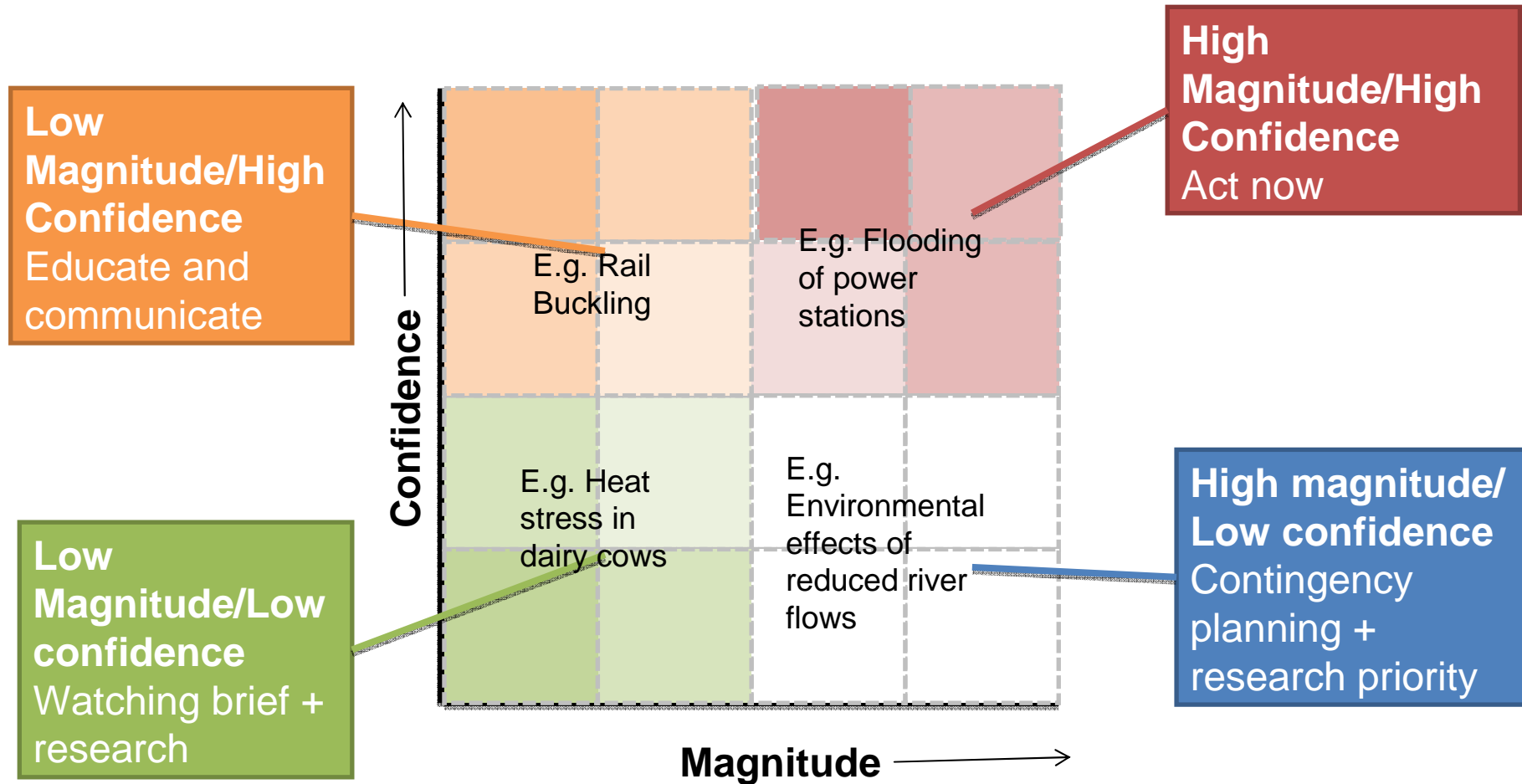
5. Assign magnitude (logarithmic scale) and confidence scores to each risk

Magnitude	Low	Medium	High
Social	100s	1000s	Millions
Economic	£1 M	£10 M	£100 M
Env.	100km	1000km	10,000km

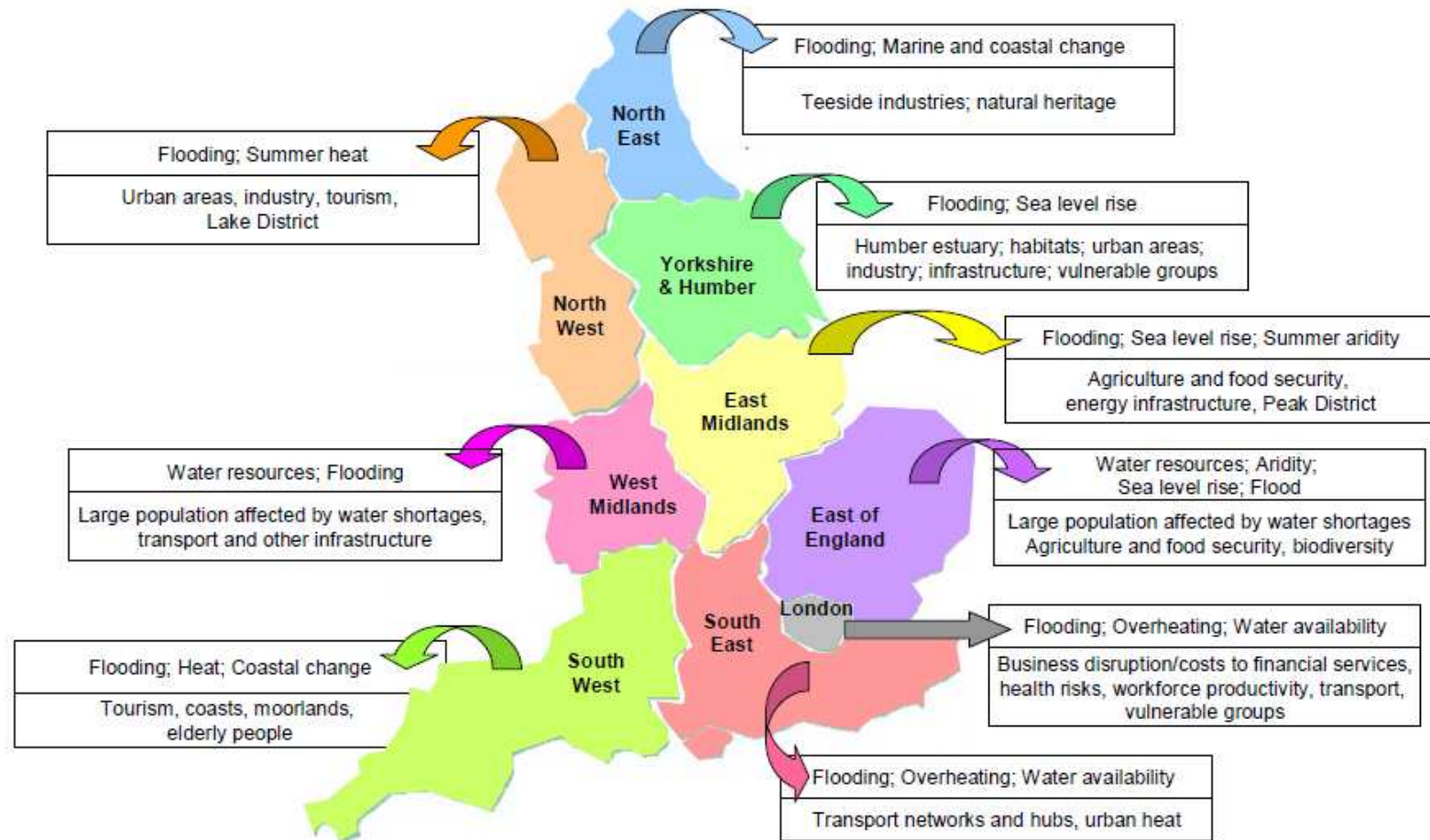
4. Compare geographically



Assessment of risks



England in the CCRA



Key:

Most significant climate change effects
Key consequences and receptors

South East

Area 19,096km²; Population 8,000,550 (2001)

Most Significant Climate Change Effects:

- Flooding
- Overheating
- Water availability

2,200km road and rail
at risk from **flooding**

River flows in 2050s projected
to **increase** by **16%**.
(central estimate medium emissions p50)

Sea level rise in 2050s
projected to **increase** by **0.2 m.**
(central estimate medium emissions p50)

Mean **summer temperature** rise
in the **2050s** between **2-4°C**
(central estimate medium emissions p50)

Wildfires, projected to become more frequent, already
cause disruption to A-roads and power lines and
damage to the **natural environment.**

Some of the **countries' largest ports and airports**
plus the **busiest motorway's** are here and at **risk of**
flooding.

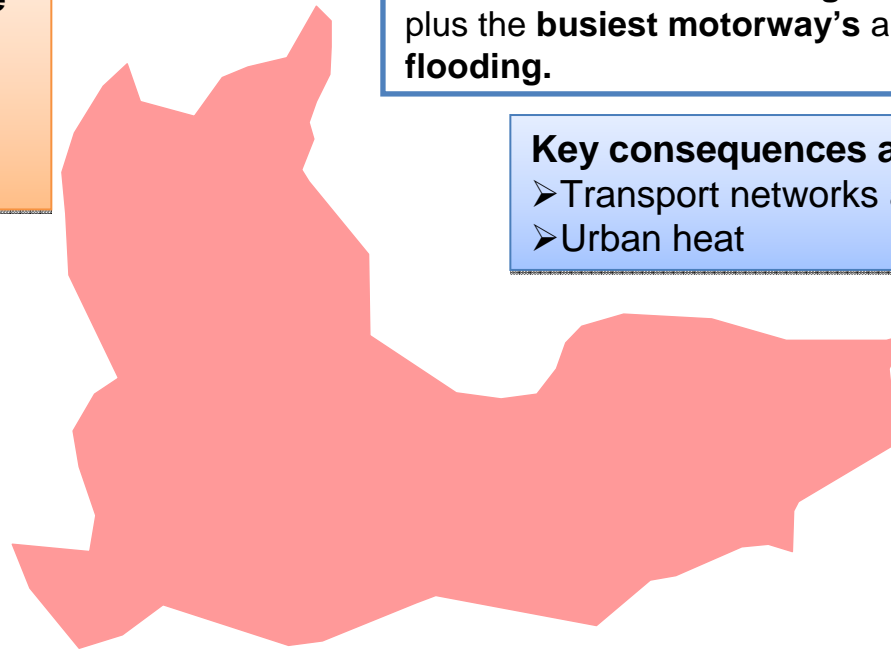
Key consequences and receptors:

- Transport networks and hubs
- Urban heat

The **greatest**
number of
deaths from
summer heat are
projected to be in
the **South East**
(and London).

Deployable output of the **Thames River basin** in
2050s projected to **reduce** by **22%**. (central estimate
medium emissions p50)

Deployable output of the **South**
East river basin in **2050s** projected
to **reduce** by **10%**.
(central estimate medium emissions
p50)



Overview

What does the CCRA do?

Presents uncertainties as ranges with assigned confidence scores, in view of large uncertainties in the projections.

Informs the development of the NAP, feeding through to a study on the economics of different adaptation options (The Economic of Climate Resilience study, which will be published in mid-2012)

What doesn't the CCRA do?

Make predictions of impacts of any future planned actions to reduce the magnitude of the risk; only includes some types of socio-economic change

CCRA and NAP messages

Resilience is at the heart of strengthening our economy and adaptation presents a number of opportunities

The CCRA uses an innovative methodology which allows comparison of risks based on scale of impact, when they're likely to occur and our confidence in the evidence base, allowing us to better prioritise our efforts to adapt to climate change / improve the UK's resilience to future weather

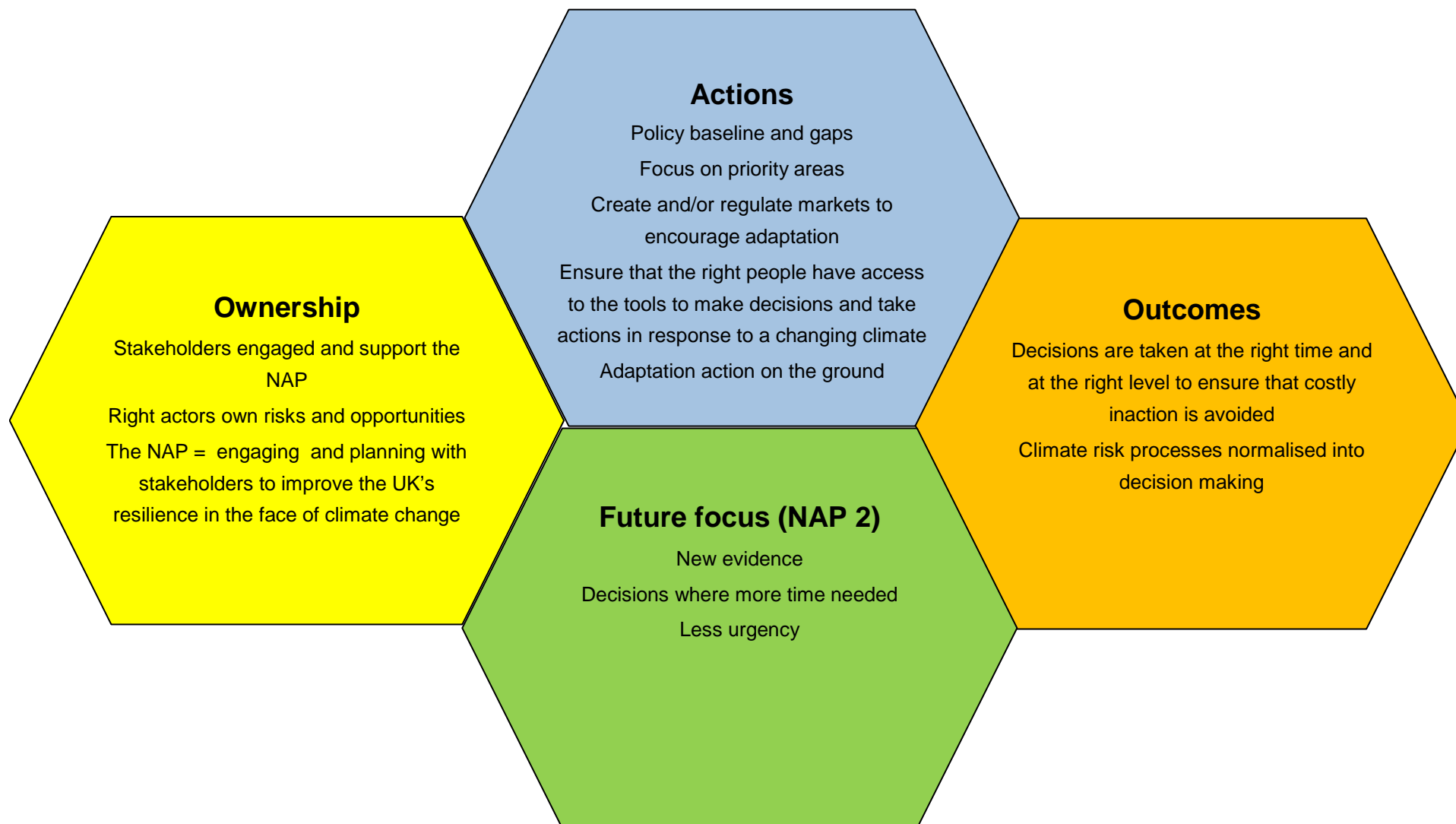
The UK has a range of policies in place to manage many of the weather related risks we currently face such as flood risk, water supply, but consideration will be possible on what further action is needed as the climate changes.

The Government will use the evidence presented in the CCRA to underpin the development of the UK's first National Adaptation Programme, that will be presented to Parliament in spring 2013.

Suggested approach to developing the NAP



Department for Environment
Food and Rural Affairs



Questions on next steps

What factors including on messaging, from a sub national perspective, do we need to keep in mind for the CCRA launch and the dissemination of the findings?

How do we identify what's important at sub national level as we move towards NAP?

What involvement do you want from the NAP process and how do we maximise input in a resource effective way?