

Climate Change Adaptation in London

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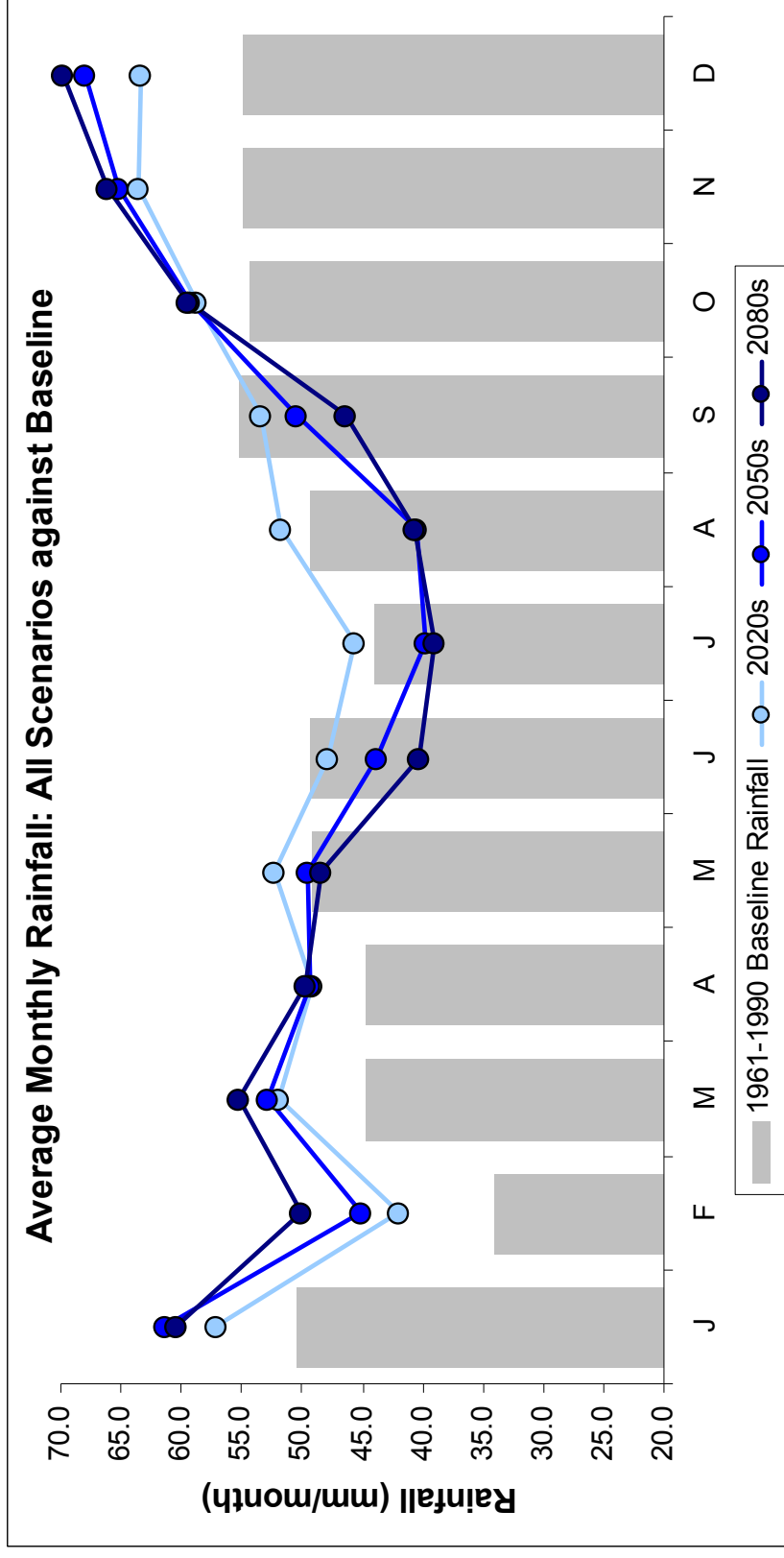


The London Climate Change Adaptation Strategy

We have taken a risk-based approach that :

1. Assesses how London is vulnerable to weather-related risks today
2. Uses climate projections to understand how climate change accentuates existing risks or creates new risks / opportunities in the future
3. Identifies and tests risk management options
4. Provides a framework to
 1. Identify where the Mayor is uniquely placed to act
 2. Identify where other partners are best placed to act and how their actions can be facilitated or enhanced
 3. Identify where further work is required to understand the climate and / or impacts

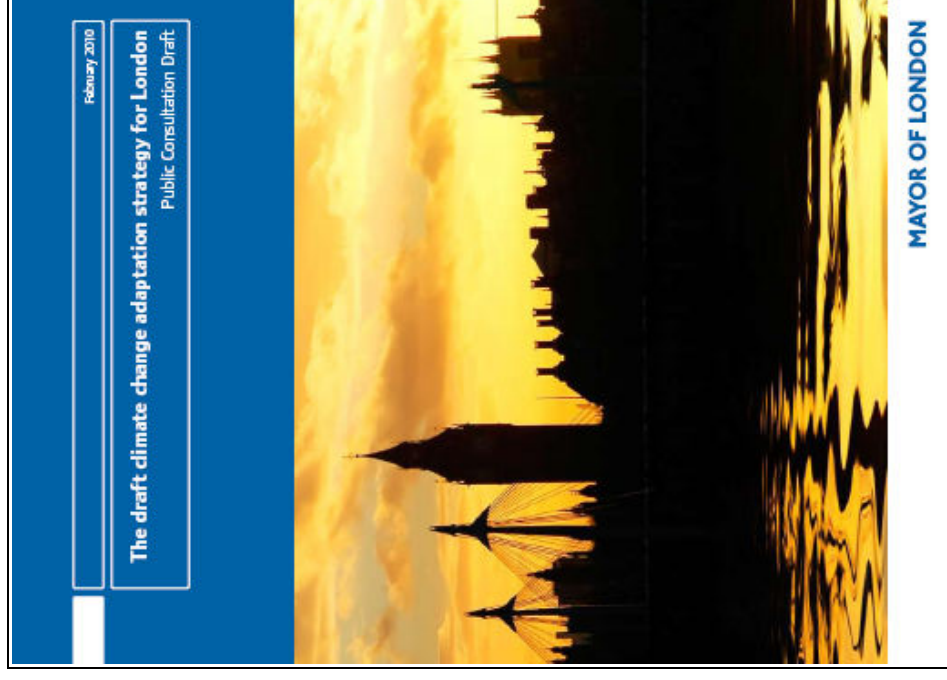
Warmer, wetter, hotter, drier



From UKCP09. Points generated show 50% probability

How is London vulnerable to extreme weather and climate change ?

- **Flooding**
- **Water resources**
- Overheating
- Air Quality
- Subsidence and heave
- Wind storms
- Global climate events

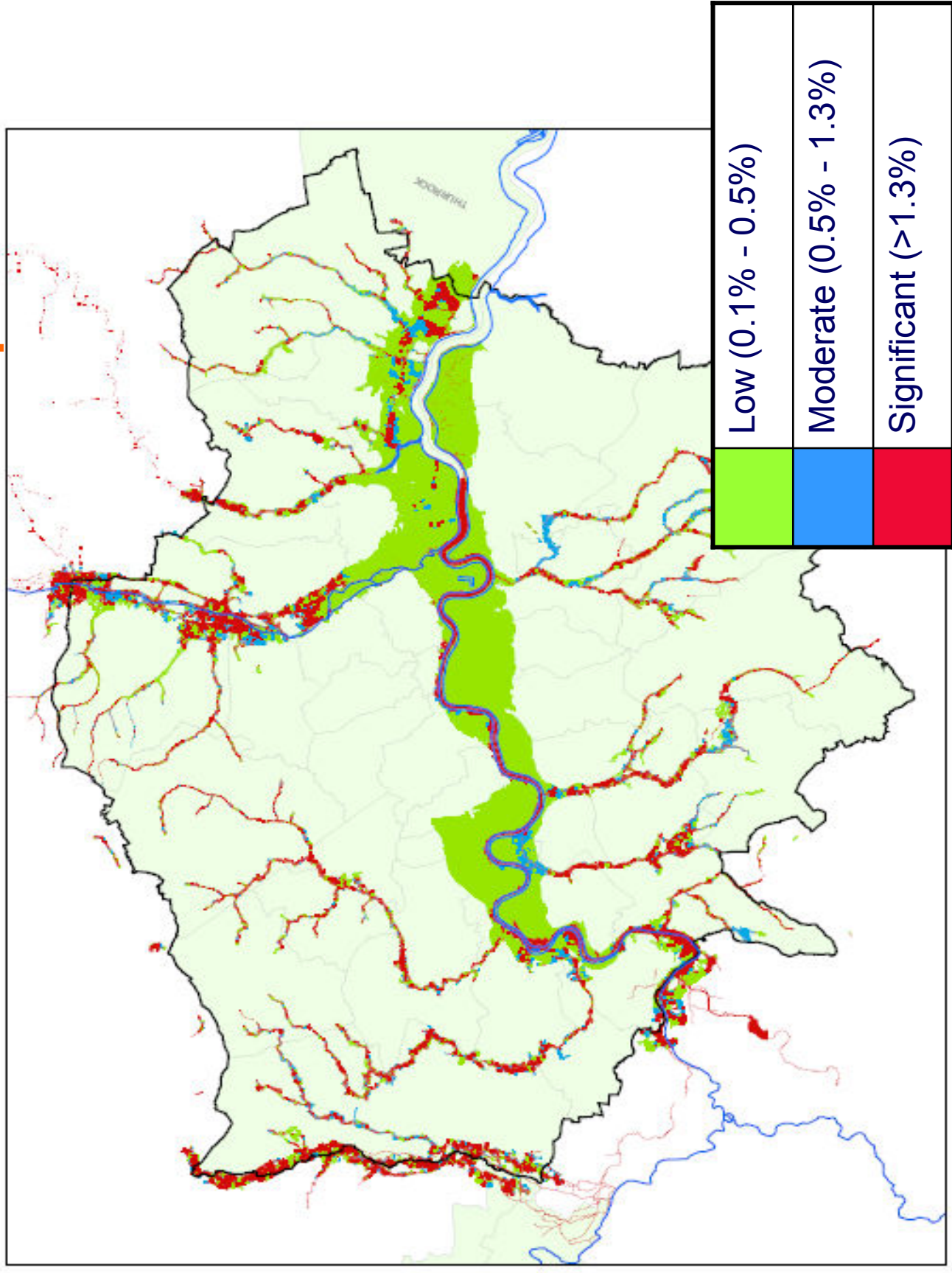


The challenges - flooding

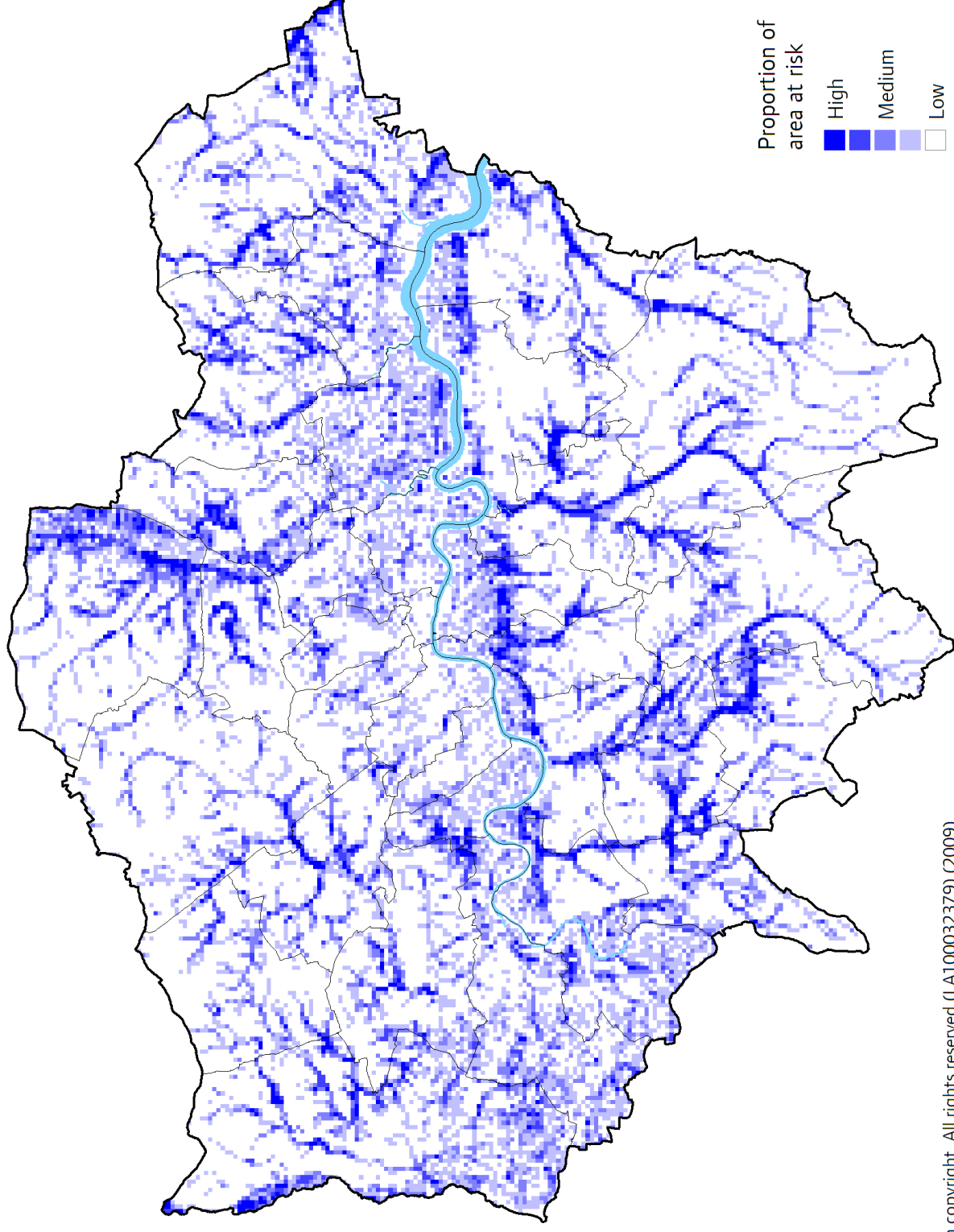
3 strategic scale flood sources

- Tidal
- Fluvial
- Surface
- Frequently experience flooding from more than one source
- Climate change will increase probability, London's growth may increase consequence

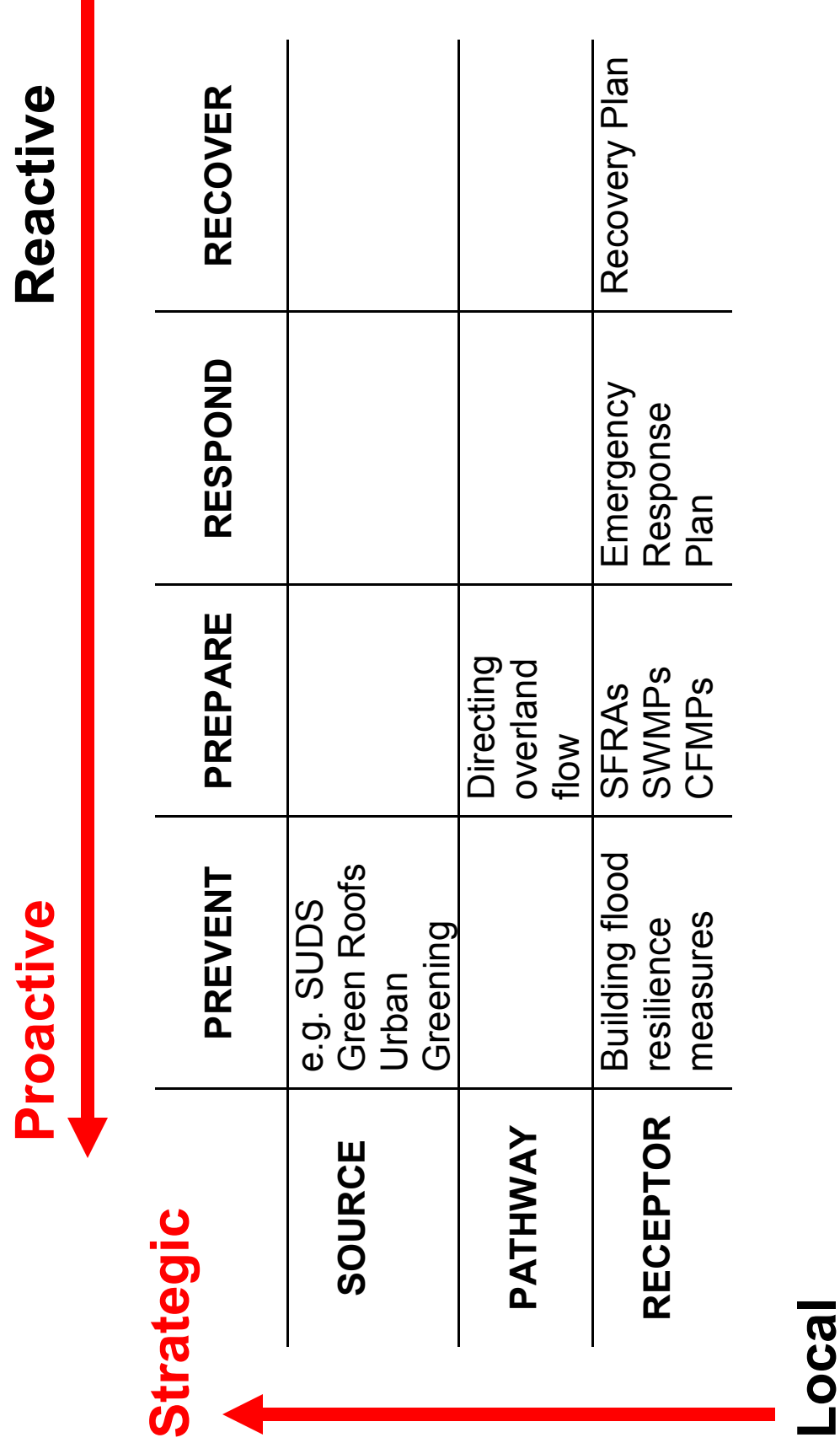
15% of London lies on river floodplains

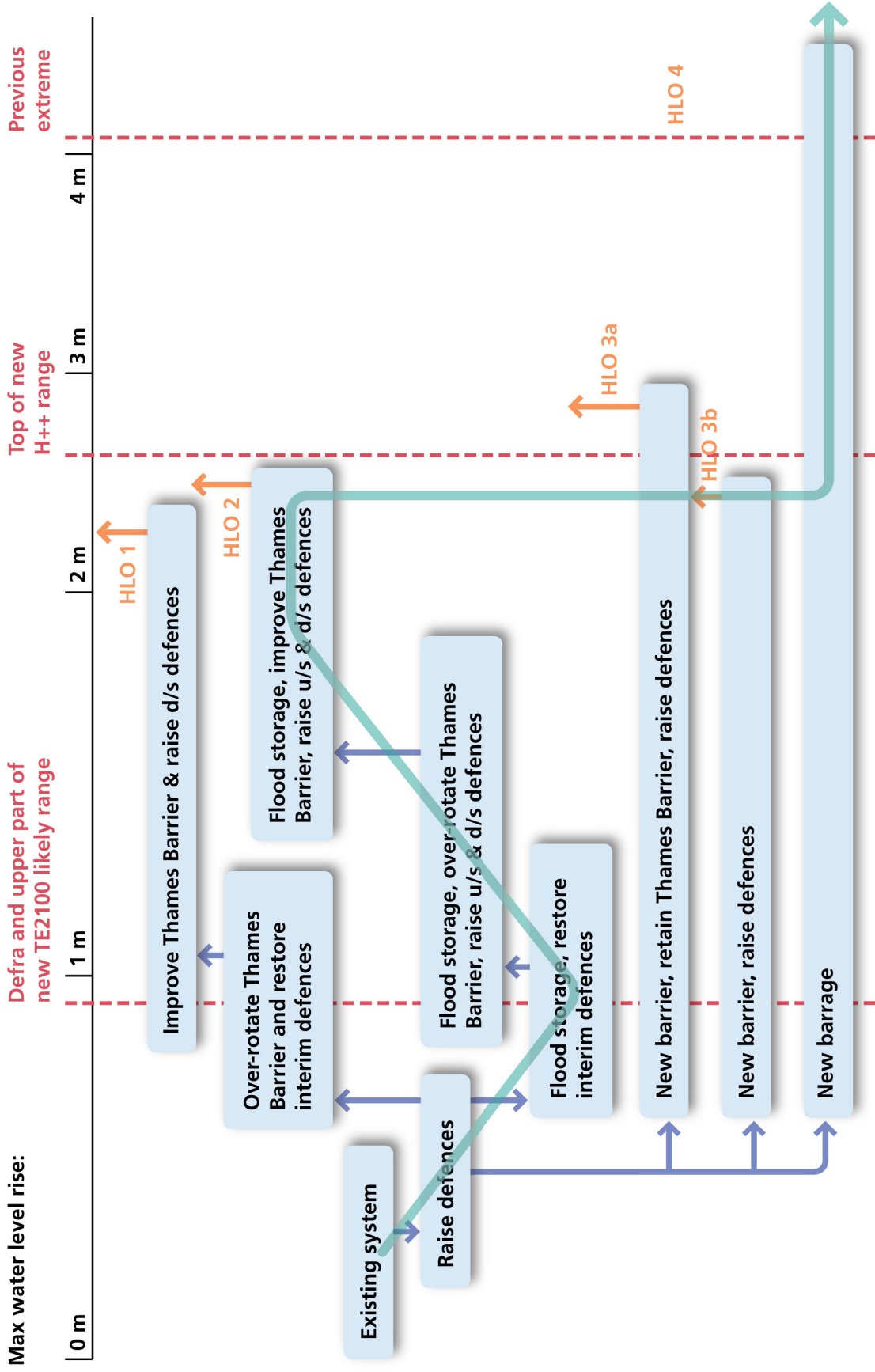


680,000 properties at risk of surface water flooding



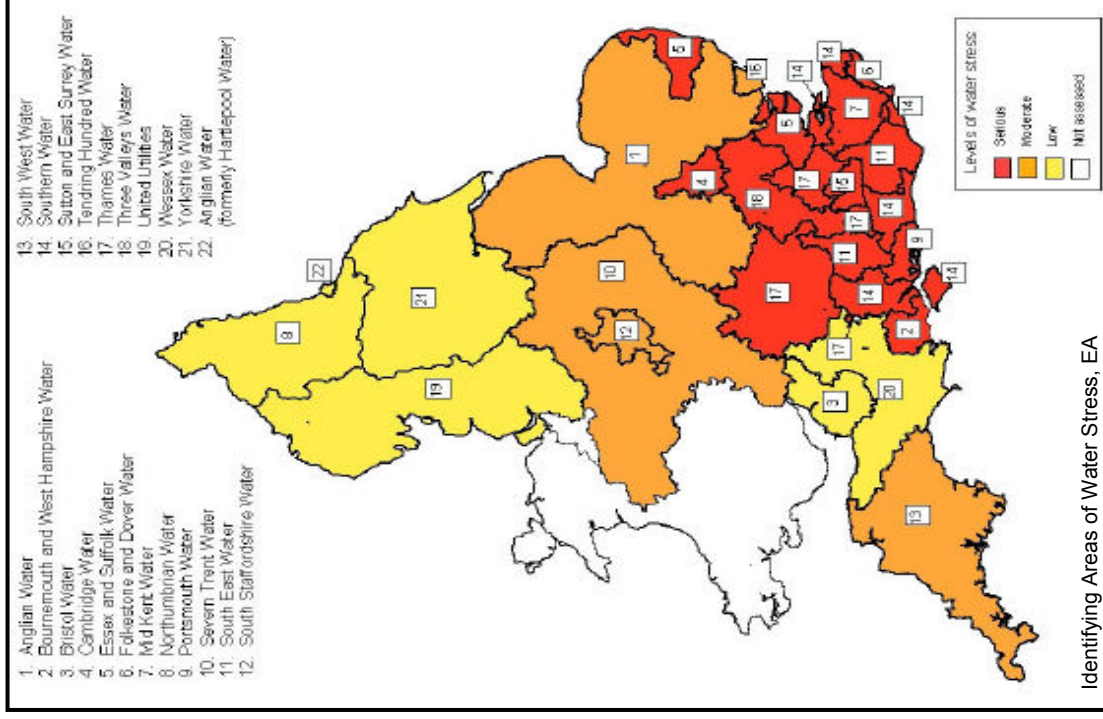
Assessing the range of options



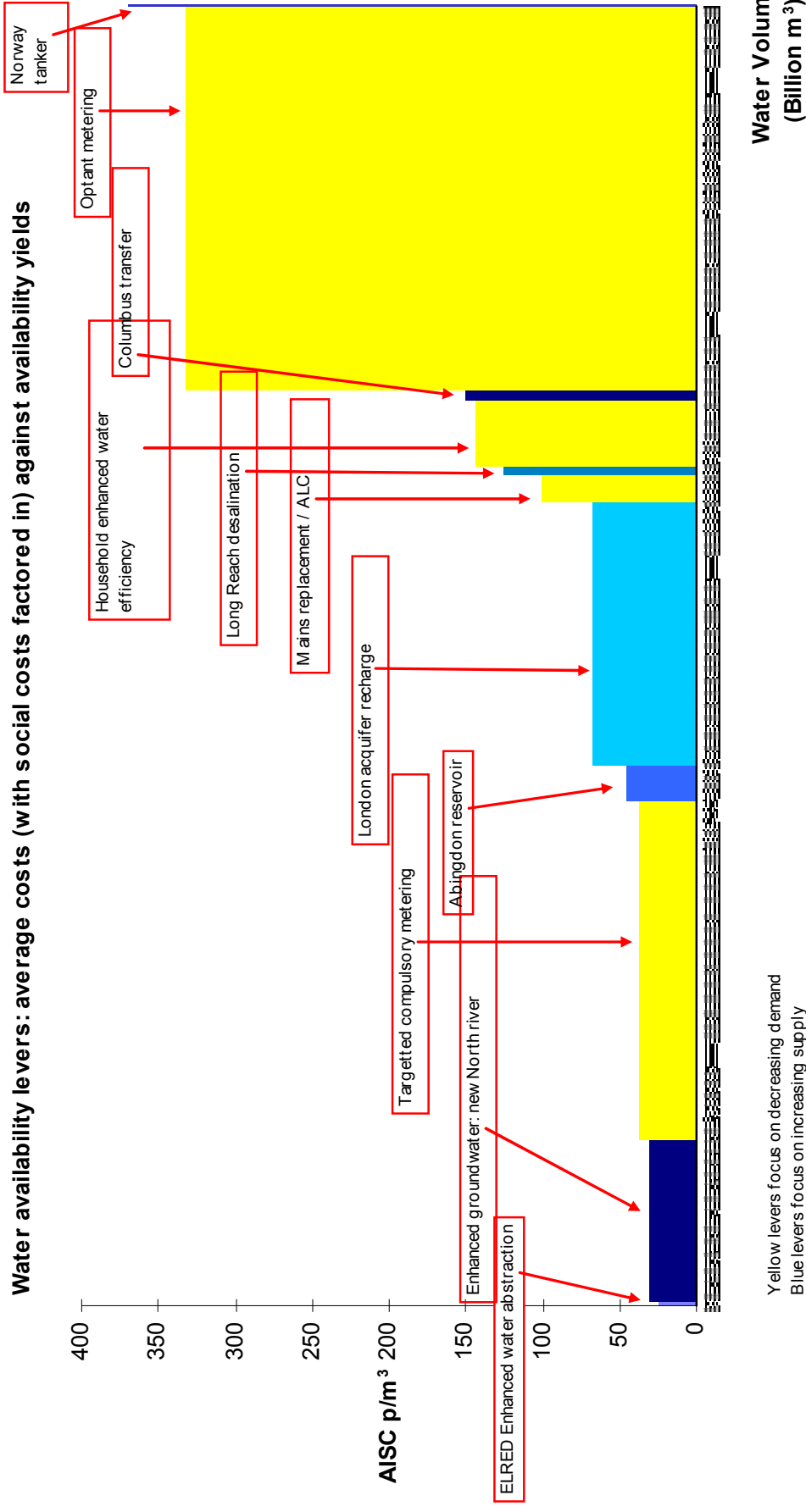


The challenges - drought

- The south east of England is already seriously 'water stressed'.
- 80% of London's water supply from Thames and Lea, 20% from aquifer
- London's water resources are already over-abstracted, or over-licensed.
- In a dry year, Thames Water forecast that current demand would be 80MI/d greater than available supply
- Londoners use more water than the national average (161 l/p/d vs 150 l/p/d)
- Only 1 in 5 homes has a water meter
- The Victorian-era water distribution network loses over 1/5 water in leakage



Average cost curves for balancing supply and demand



Lessons from London

1. Climate models are tools not answers
Need to understand your vulnerabilities
2. Adaptation is hindered because we don't value the right things
Standard cost benefit analyses favours heavy engineering responses
3. We need to identify and develop flexible 'adaptation pathways' for each risk
Adaptation needs to be dynamic in response to the changing risks.
4. You cannot protect all the people all of the time
People need to own the risks they face to be part of the solution.