



Department  
for Environment  
Food & Rural Affairs

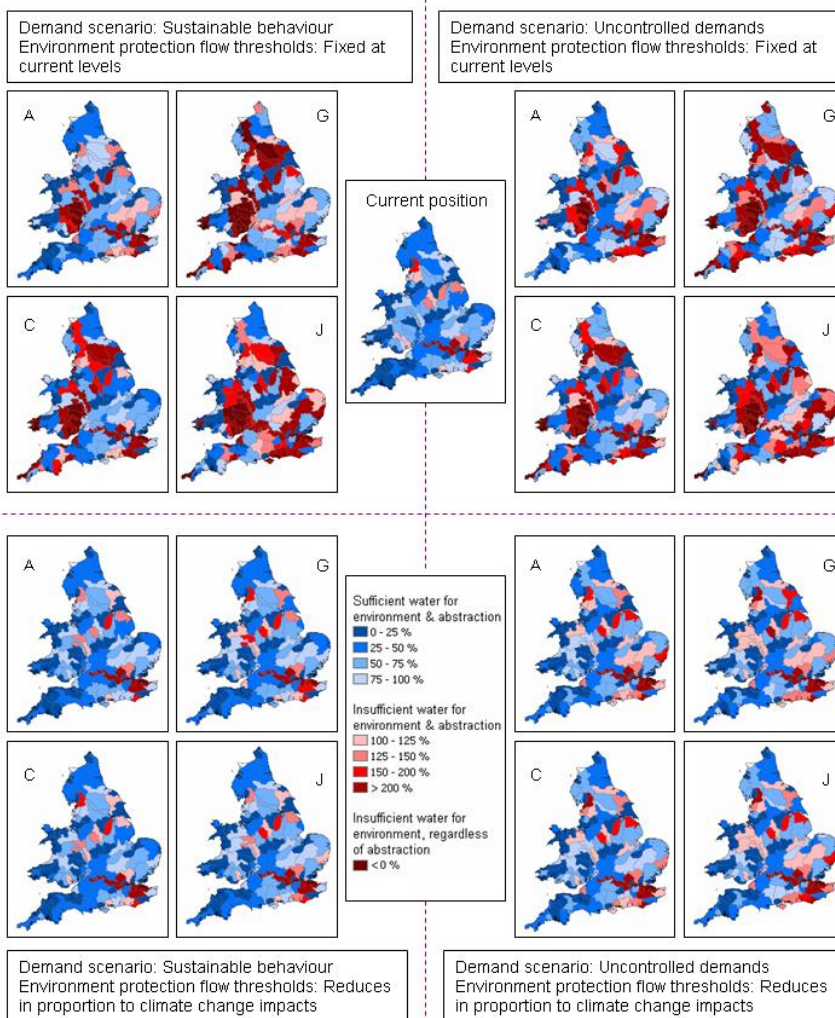
# Managing uncertainty in water availability

The case of abstraction reform

Henry Leveson-Gower

Water Services

# The problem: Wide range of uncertainty around future water availability



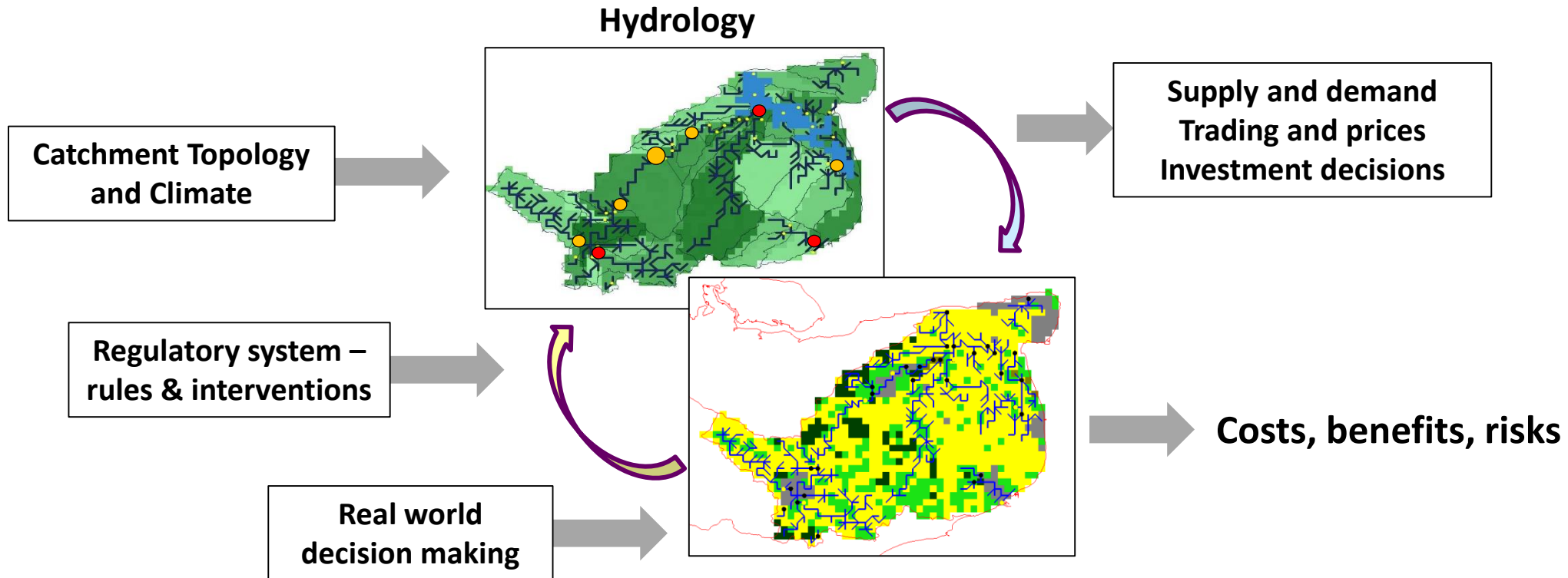
The answer:

- Modelling future scenarios
- Adaptive institutions

# The tool: ABM modelling to do scenario analysis

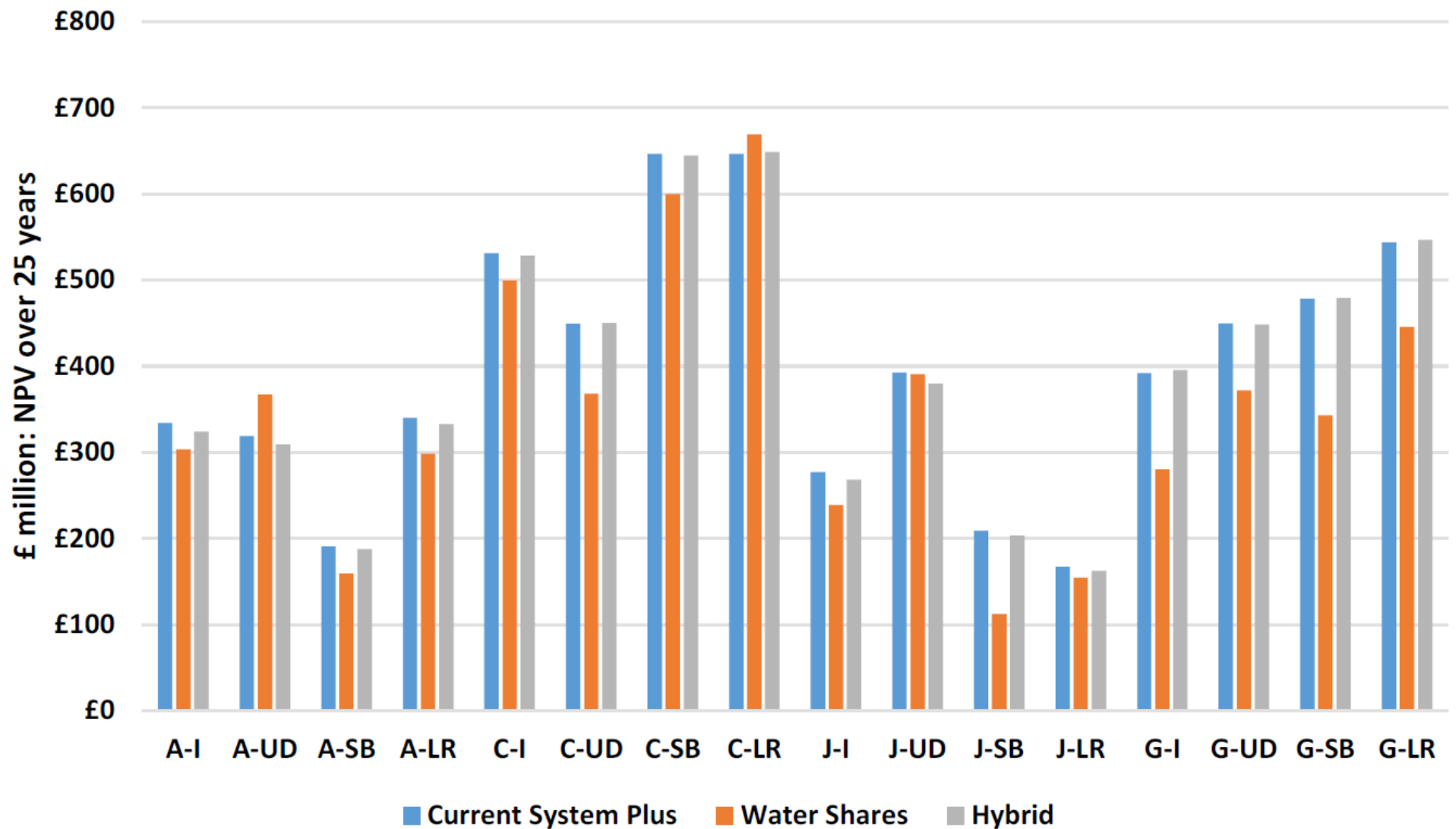
A combined **Hydrological** and **Economic Behaviour** Model

**Three policies** under a range of **climate** and **socio-economic** scenarios



Risk Solutions Lead Consortium

# The Results under different scenarios



## Principles for Adaptive institutions

- Create a range of enabling tools e.g.
  - Trading rules
  - Share accounting framework
  - Flexible flow control mechanisms
- Adaptive institutional arrangements – catchment rules
- Focus on places with immediate needs and opportunities
  - Trial and learn
- Link in with emerging trend towards catchment management

## Summary Approach

- Understand range of uncertainty
- Develop range of tools to mitigate risks
- Create adaptive institutions
- Focus learning where immediate issues
- Adapt and expand overtime