

# **UK Groundwater Forum**

**Groundwater related supply problems  
being faced by the water industry**

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# Summary

- Planning arena
- Water availability
- Pollution
- Demand management
- Price
- Future options



## Planning arena

- Statutory duty to supply
- Non-statutory consultee
- Regional and Local Development Frameworks
- Sustainable Communities?
- Timeframe of WR plans vs. infrastructure life
- Managing uncertainty – is the WRP process good enough to assure stakeholders?

# Water availability



- CAMS : over-abstraction
- Grab it back volumes

Region	2010	2025
Anglian	42	210
Thames	46	187
Southern	20	80
	<b>108</b>	<b>477</b>

## Water availability

- CAMS : over-abstraction
- Grab it back volumes
- Time limited licences

# Impacts of time limiting

- Shifts risk from the EA to companies
- the EA have a reduced risk of environmental impact
- greater control to change or 'grab back' licences for the environment
- However the EA have stated they will not destabilise public water supplies
- this suggests a great deal of change in licences to replace lost resources or other options at higher risk and cost

# Impacts of time limiting PWS indirect costs



- **reduction in company DO increases risk**
  - *higher risk of supply failure*
- **a change in DO also increases risk**
  - *the risk of non-renewal*
  - *the risk of replacement of the asset*
  - *increase in headroom?*
- **and costs more**
  - *higher RoR for uncertainty of resource base*
- **loss of DO also means a lost opportunity**
  - *lost opportunity has a commercial value*
  - *eg. lost opportunity for extra sales*

# Impacts of time limiting PWS direct costs



- the cheapest options are already in operation
- further away from point of use or higher UC
- stranded assets
- shorter asset lives = inefficient design
- low capex - high opex
- higher LRMC
- makes previously higher cost options more attractive eg. water efficiency

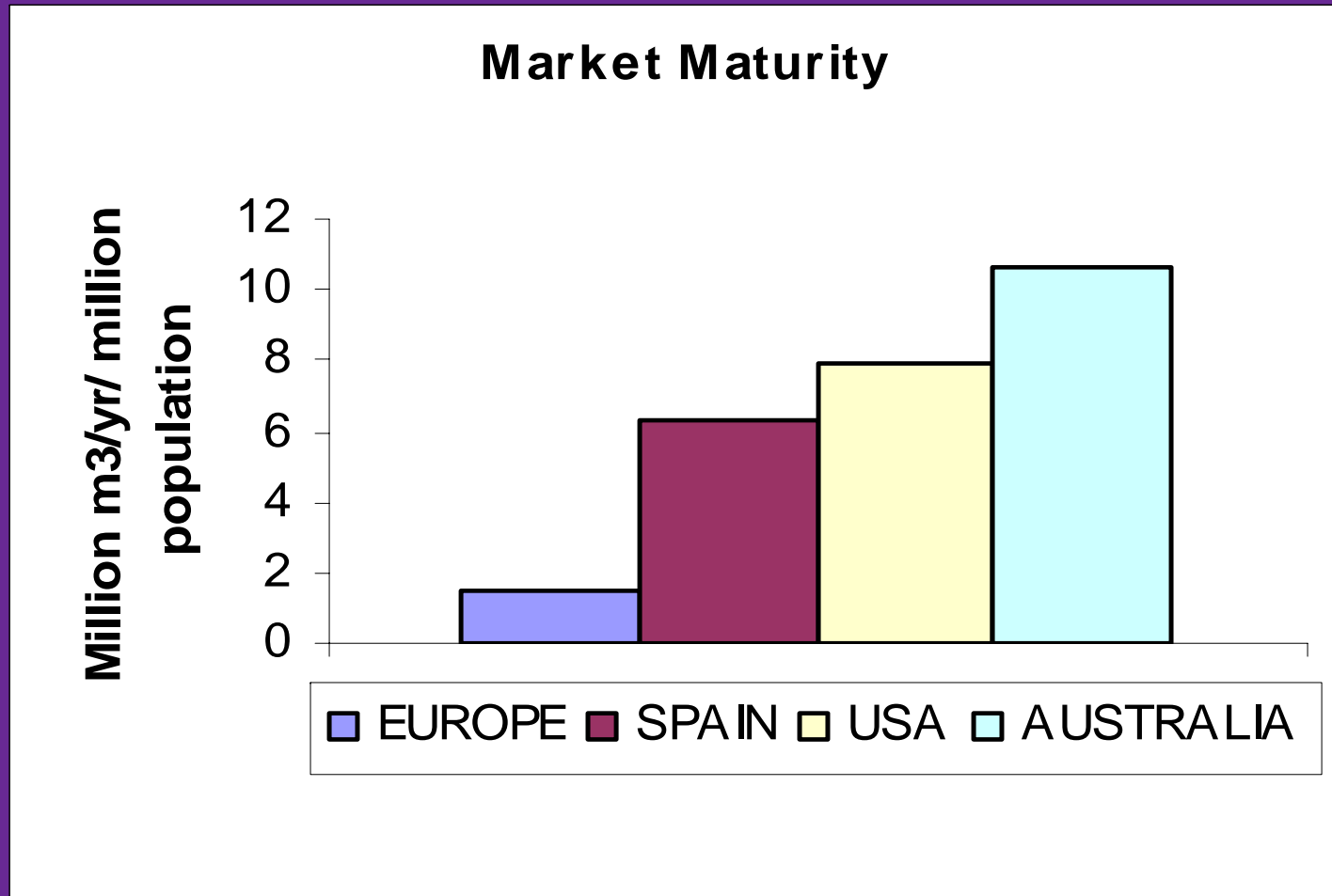
**Indirect and direct costs will increase customer prices**



## Water availability

- CAMS : over-abstraction
- Grab it back volumes
- Time limited licences
- Inability to plan for non-designated forecast changes
- Will WFD help?
- New sources – ASR and recycling?

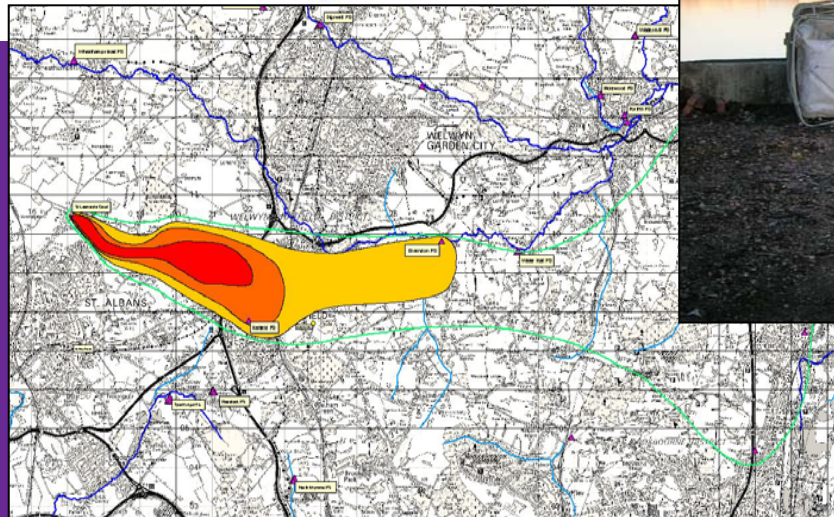
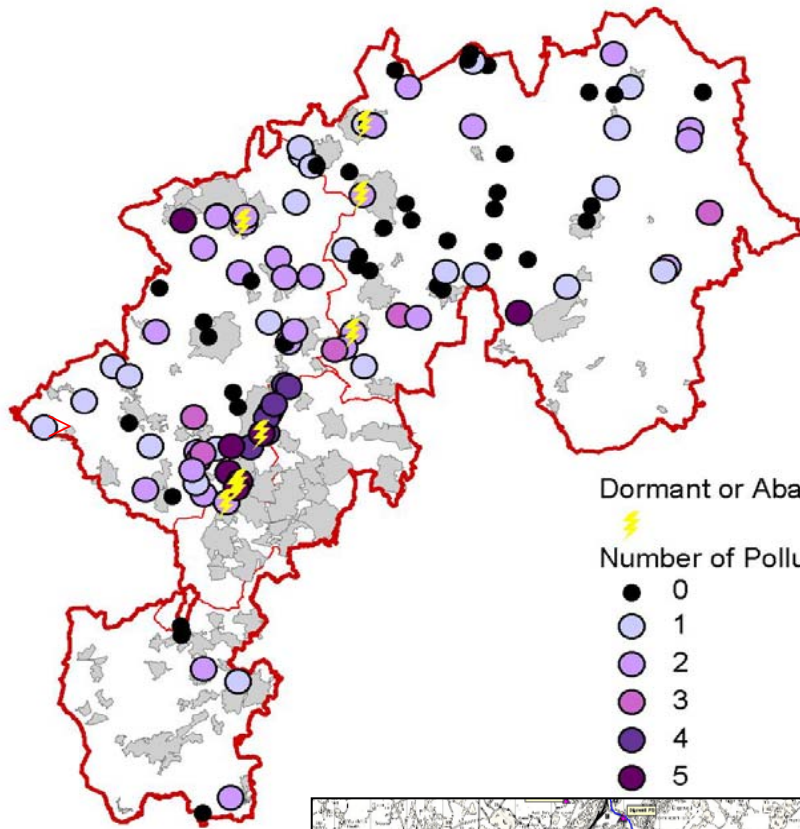
# Global water reuse status



# Pollution



- 'Point risk pollution has been solved'



# Pollution



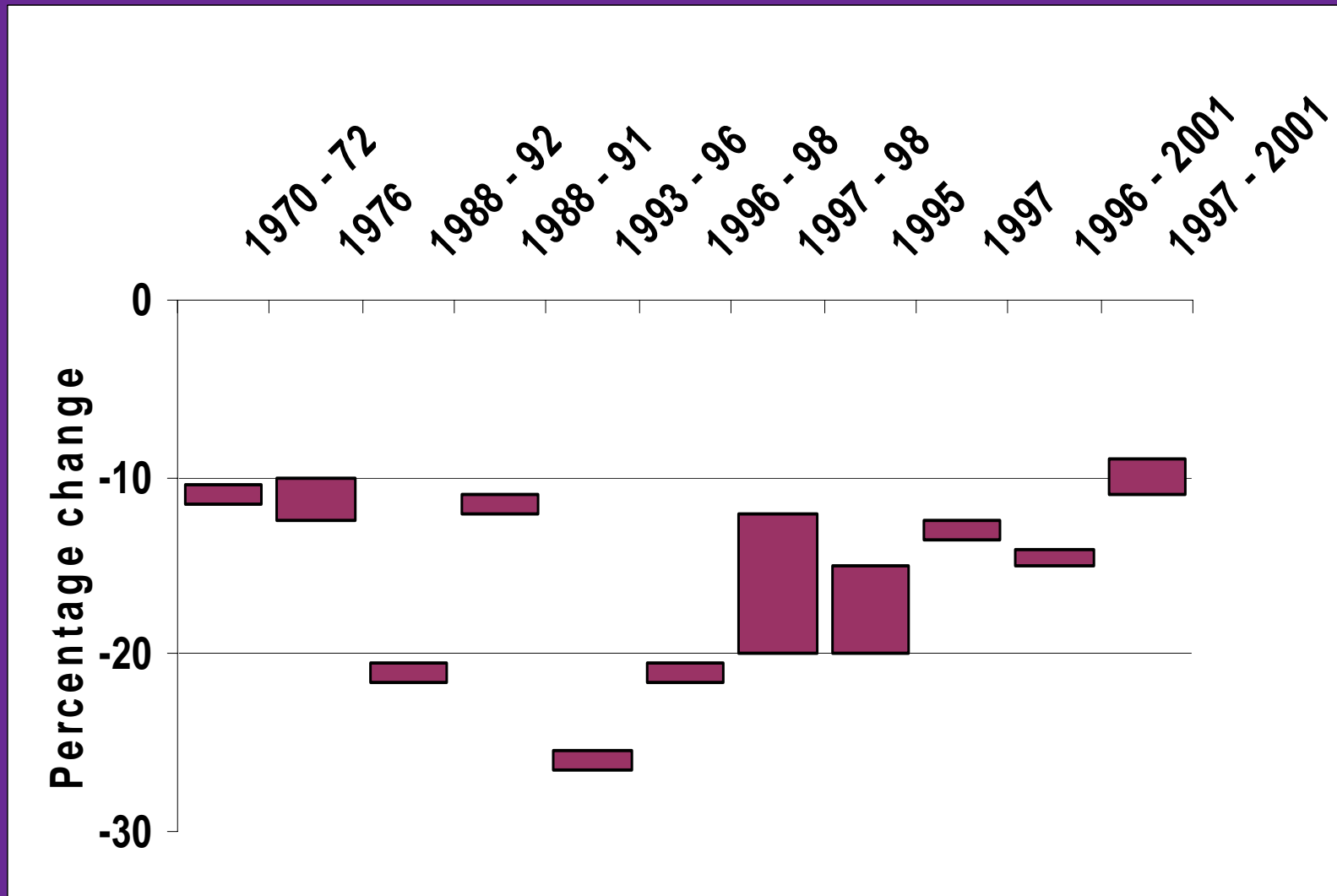
- 'Point risk pollution has been solved
- Mitigation may mean no damages
- Conflict of duty of care with prosecution evidence
- Diffuse pollution – uncertainty of catchment management
- Groundwater protection zones, WFD Annex 7 – SPAW's
- Do we need a seed change in awareness ?
- Groundwater remediation

# Demand management

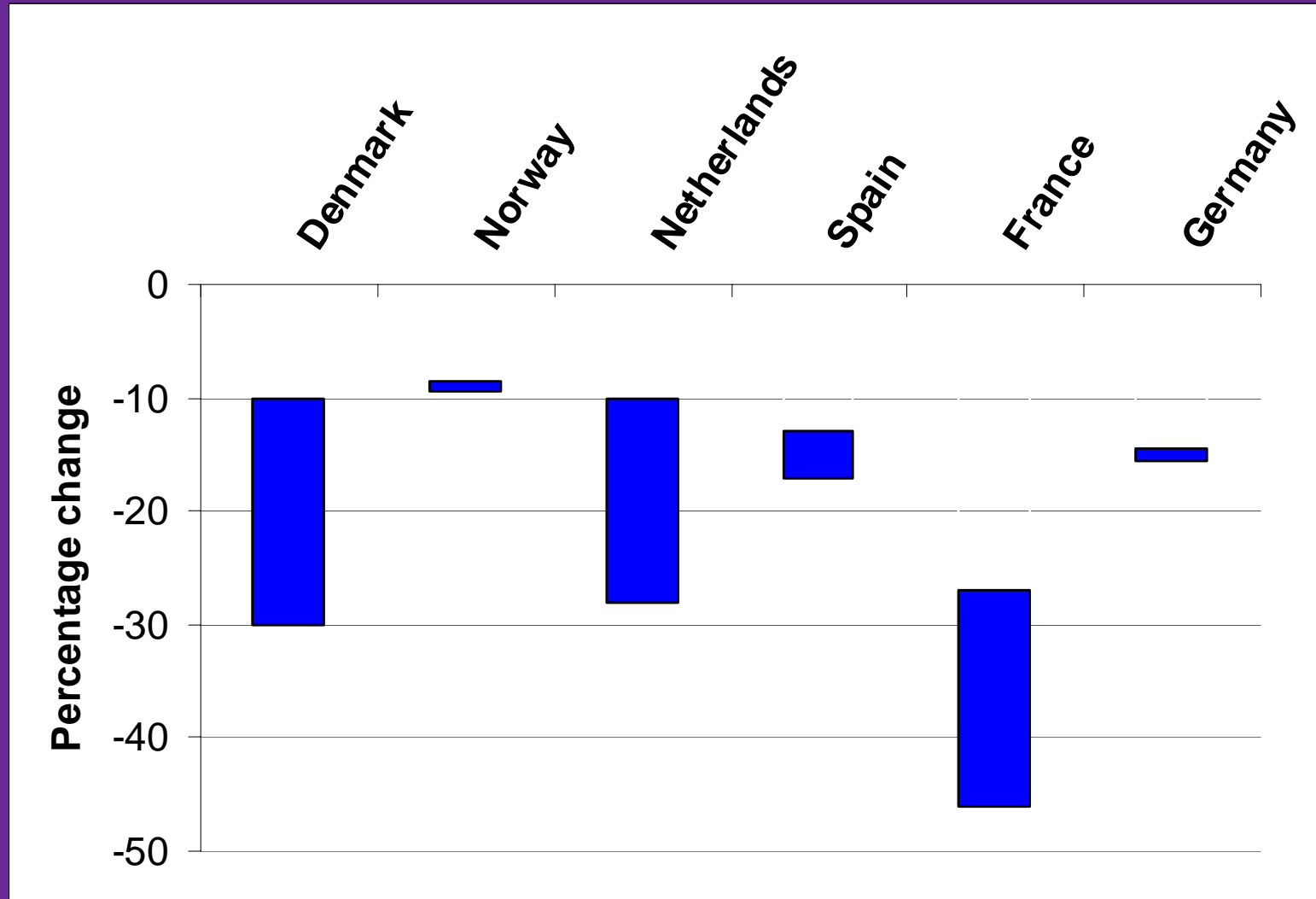


- Pressure to 'do the right thing'
- Regulatory impasse for WE at PR04
- Leakage
- Metering

# UK metering studies

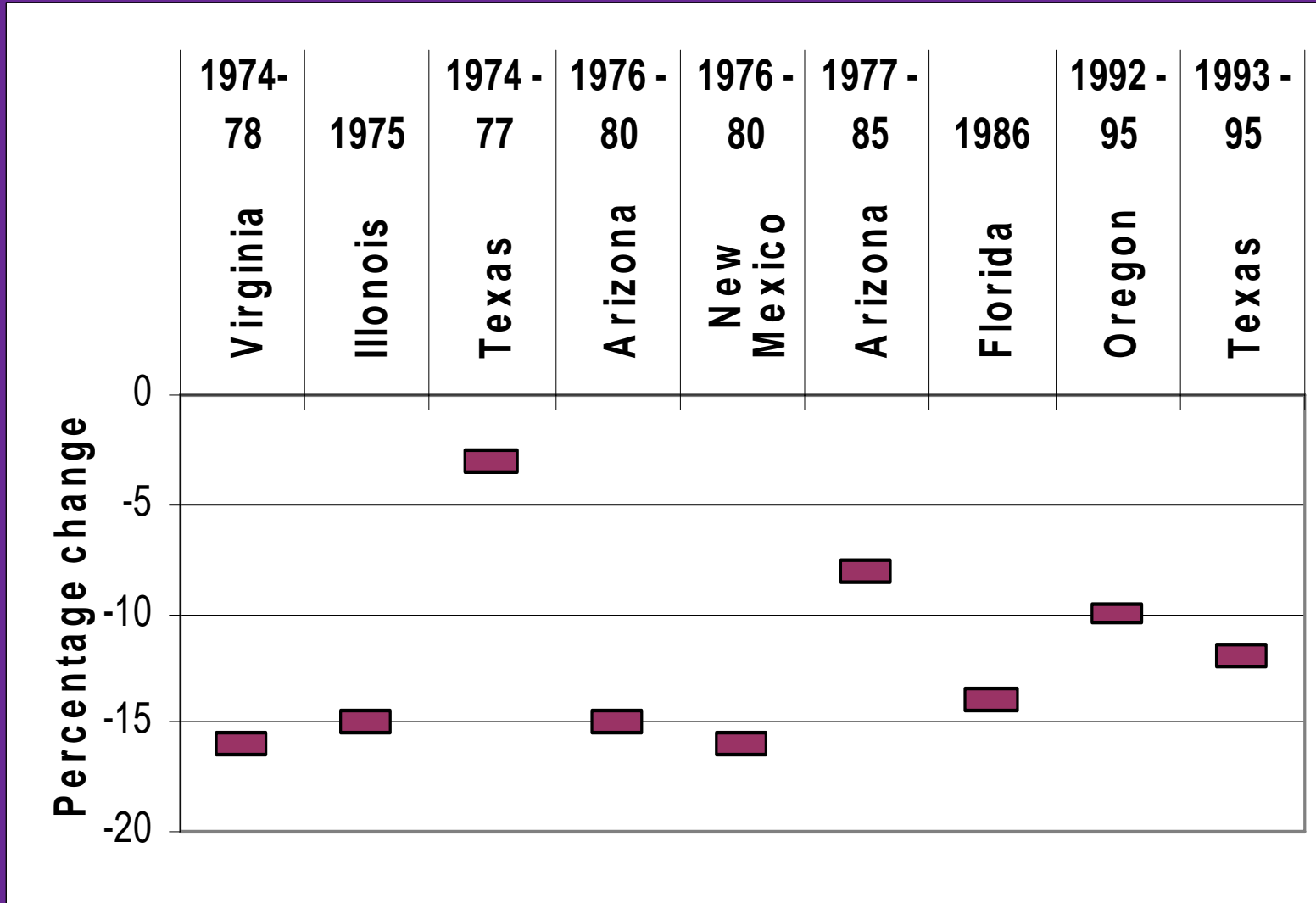


# European metering studies





# US tariff studies



# Demand management



- Pressure to 'do the right thing'
- Regulatory impasse for WE at PR04
- Leakage?
- Metering
- WE is now fashionable – WSG, SGC
- Working with developers – careful balance
- Robust evidence base
- Sociology of water use

# Price



- Sustainability reductions
- WFD, real price for water? How high?
- Right to water, political pressure for low bills, affordability
- WFD, collaborative research
- Monetary value of environmental impacts
- Price elasticity ?

## Future options for groundwater

- ASR
- Relocation, recycling and recharge
- Groundwater clean up – no fault approach
- Conjunctive and multiple year : Pumped storage
- Reduce consumption
- Stop growth
- Increase prices to real price of impacts, fund new investment and contain demand?