

# Defining drought in the UK

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#### Legislative context

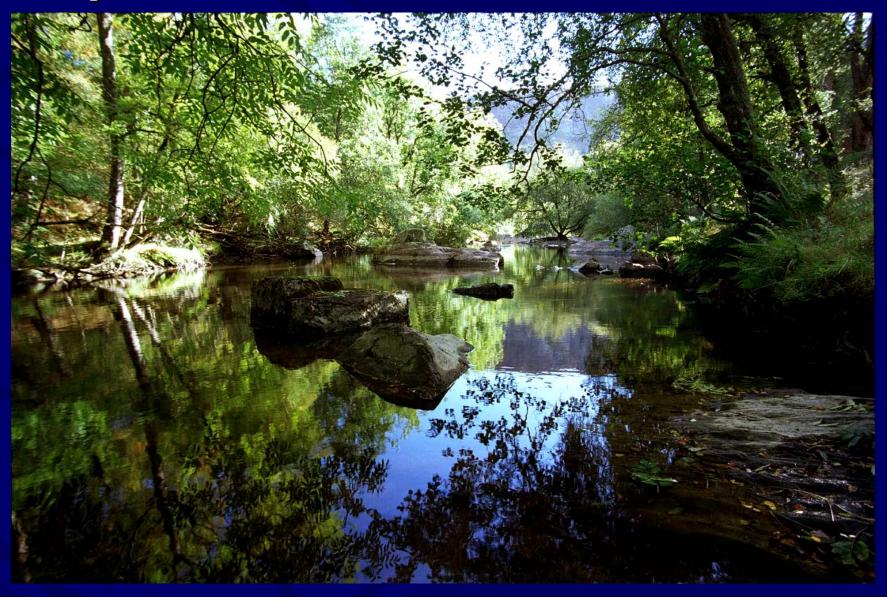
- Three different sets of legislation:
  - England and Wales, Scotland, Northern Ireland
- Three different models for water supply and regulation:
  - England and Wales private water companies, separate economic and environmental regulators
  - Scotland public sector water supply, with separate economic and environmental regulators
  - Northern Ireland state-owned and run water supply



#### **UK drought characteristics**

- UK is temperate and relatively wet:
  - rainfall 600 mm in south-east, 1000 1500 mm or more in west and north
  - little snow except in northern Scotland
- Catchments are small
- Permeable rocks in south and east
- Population density is high especially in south-east England

### Temperate and wet...



### Types of drought

- Short, intense droughts (3 9 months)
  - very low rainfall
  - important for agriculture
  - not usually significant for public water supply
- Long, dry periods (1 4 years)
  - important for public water supply
  - risk to environment



#### **Effects of drought**

- Environment
  - death of fish and other species
  - changes to vegetation and morphology
- Agriculture
  - low yields or poor quality crops
  - crop failure
- Water supply
  - additional abstractions damaging the environment
  - customer restrictions



## Water supply drought



### **Defining drought**

- All droughts are different
- Long-term weather forecasts are insufficient to forecast drought
- Impossible to know that a drought is starting
- Combination of:
  - rainfall
  - river flows
  - environmental effects
  - impact on supply



#### **Drought law**

- No legal definition of drought
- Concept of "exceptional shortage of rain"
- If an exceptional shortage of rain is likely to lead to public water supply problems, then:
  - Secretary of State can authorise additional abstractions
  - Secretary of State can authorise customer restrictions



#### Summary

- Wide range of problems associated with drought
- No legal definition
- Changes to water company abstractions and customer restrictions must be authorised by the Secretary of State

