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Defining drought in the UK

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- Legislative context
- Characteristics of UK droughts
- Effects of drought
- Drought definition



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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



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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



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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



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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



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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



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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



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