



Department  
for Environment  
Food & Rural Affairs



Llywodraeth Cymru  
Welsh Government

# Water Abstraction Reform

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EUROPEAN UNION  
Investing in Your Future  
European Regional  
Development Fund 2007-13



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# Outline

- Abstraction and why it matters
- Wider Water Resources Activity
- Abstraction reform
  - Rationale
  - Overview of options and elements
  - Implementation approaches
  - More on Water Shares and Reviews
  - Impact assessment results
  - Next steps



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# Abstraction and why it matters

- A wide range of people & businesses abstract.
  - Biggest by vol non-tidal – Water Cos ~50%, Hydropower ~33%
  - Biggest by # – Farmers 63% but ~1% of abstracted volumes
  - Wide range of others....
    - 20% of elect gen in E&W is from thermal gen using freshwater
  - Currently ~21k licences but →~26k with currently exempt
- Too much abstraction creates risks to water ecosystems:
  - In ~220 locations (210 in England) risks to high value conservation sites (e.g. Chalk Streams) due to abstraction
  - ~13 per cent of river water bodies in England and 2% in Wales are failing under the Water Framework Directive due to abstraction

# The Water Bill etc

- Water industry reform to promote efficiency
- Promoting water co resilience
  - SoS powers & Ofwat Duty
  - Encouraging interconnection
- Tackling Unsustainable Abstraction
  - Bill will remove water co compensation
  - Abstraction into the Environmental Permitting Regulations to reduce red tape
  - EA continuing vary licenses.
    - No compensation payable if serious damage
  - Consultation on bringing in exempt abstractors (e.g. Trickle irrigation) due 2014



# So why abstraction reform.....

- Major future challenge – Water Scarcity....
  - Drier summers under climate change
    - Agric need to irrigate up esp potatoes & field veg
  - Increasing population demanding water
- .....And an old abstraction regime not up to this challenge as costly, slow and bureaucratic...
  - to protect the environment; and
  - to trade and share out water.
- Which means
  - We don't make the most of the water available
  - It is costly to abstractors to run and may even collapse under the strain.



# The consultation and impact assessment

- Objectives:
  - We want to promote resilient economic growth while protecting the environment
- Two options proposed - focused on surface water
  - Current system plus
  - Water shares
    - Joint resource responsibility → catchment management
    - water accounting and mgmt → trading
  - ~~‘Pay As You Go’~~ x
- Positive impacts from reform in IA
  - But not significant difference between options
  - Further work to develop evidence base

# Key elements of reformed system

- Better linking of access to flows
  - From seasonal licences to flow based conditions
  - CS+: bonus water, smart HoFs and Min Reg
  - WS: (fortnightly) allocations based on shares in water resources
- Integration of discharges
  - Requirement to return portion of abstraction – net abstraction
  - But treatment of sewage discharges to be determined
- Element of charging based on use
- Facilitation of trading
  - CS+: pre-approval of low risk temporary trades
  - WS: pre-approval of allocation trading inc upstream & ‘put & take’
- Reviews covering all abstraction permissions
  - No time limits but targeted risk based catchment reviews
  - No compensation for changes but notice

# ... Proportionately implemented

- Basic (>50%) vs enhanced (~30%) catchments based on:
  - Risks to the environment
  - Gains from trading
- So closer management of abstraction in enhanced:
  - CS+: bonus water and smart HoFs; pre-approved trading
  - WS: varying allocations; pre-approved trading
- And therefore trading platforms and smart meters required only in enhanced catchments
  - Probably also more flow monitoring
- Basic catchments similar to current system except
  - No seasonality, min reg level and use based charging; and
  - Reviews possible but unlikely to occur as low risk
- As conditions change, poss basic → enhanced



# .... With transition of current licences

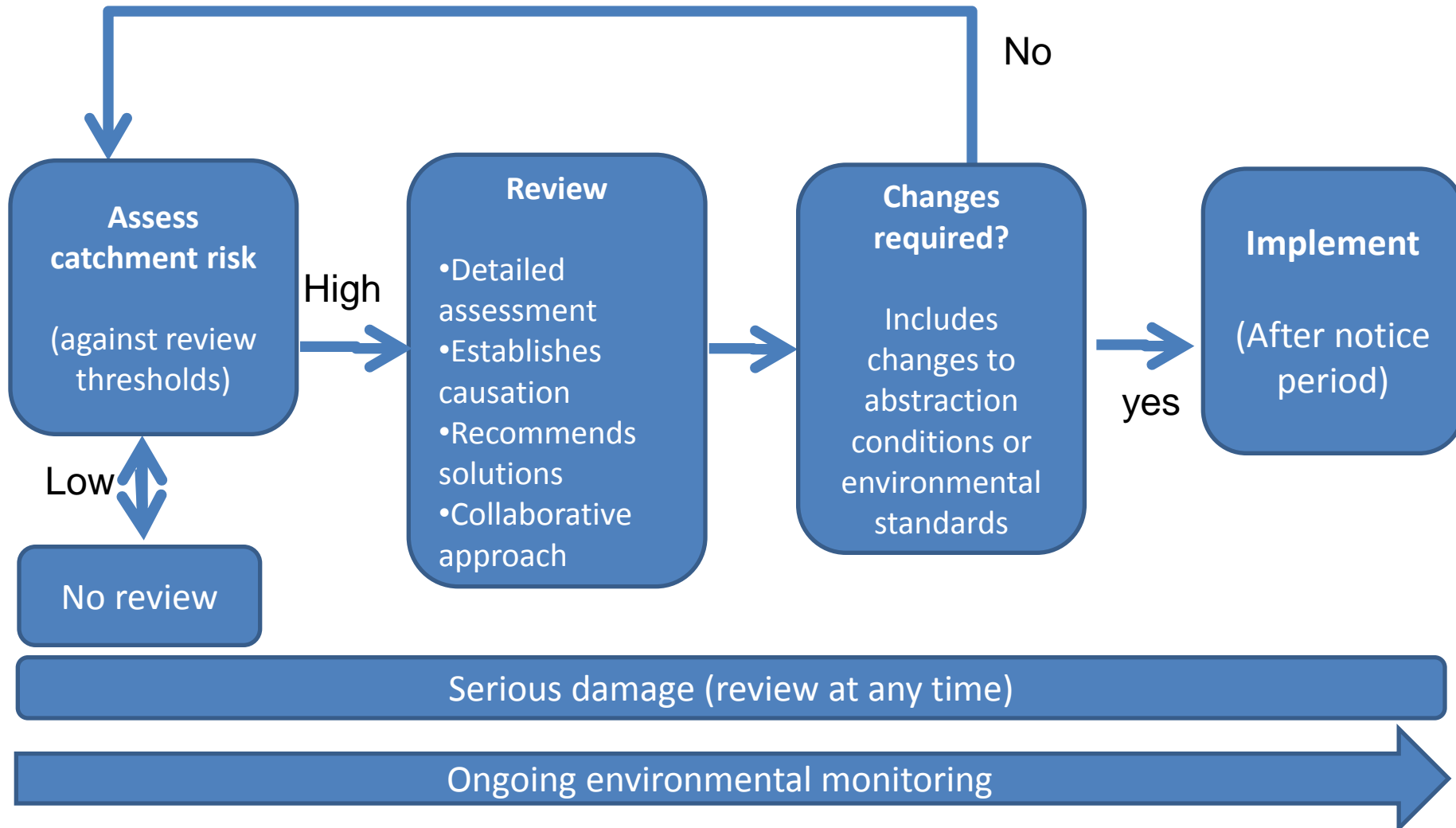
- Many elements of current licences reflected in new system;
  - E.g. HoFs and local conditions
- But unused licensed volumes reduced
  - to prevent env deterioration
    - Especially due to trading of ‘paper water’
  - And provide a ‘realistic’ view of available water
- Key options
  - Universal reductions
  - Catchment based targeting over licensing
    - In all catchments or just where trading facilitated
  - Plus new investment reserve
- On basis of:
  - Average historical actuals, av. of peaks, combination of actual and licensed



# More on..... Water Shares

- Conversion of (reduced) licensed volumes and HoFs into shares:
  - Shares of water resources ..... in management units .... of different reliability
    - So Q30 HoF would give a share in low reliability resources
    - No HoF would give a share in high reliability resources
  - Potential to have shares also in up stream management units
- Regular (~fortnightly) determination of allocations based on share, reliability and resource
- Trading of allocations from each management unit
  - Inc upstream where shares in upstream management unit
  - And 'put and take' trading from reservoirs & potentially re-use schemes
- Basic catchments:
  - Allocations would be on or off depending on resource availability.

# More on..... Reviews



# Summary of Impact Assessment

- Methodology
  - 4 catchment case studies using integrated hydrological – agent based modelling
  - Aggregated over E&W 2025-2050
  - 4 climate change and 4 demand scenarios
- Results
  - Reform £100-500m NPV for England, mainly due to water cos
  - Reform £-10-+30m NPV for Wales as less water availability issues
  - No sig difference between options due to model limits
  - RPC amber assessment – ‘fit for purpose’
- Next steps
  - Improve modelling and analysis inc 2 extra catchments

# Key points

- Fundamentally this is about smarter regulation not changing environmental goal posts
  - Env requirements still determined by WFD and HD
- Should increase flexibility for irrigators
  - From seasonality to flow based regulation
  - Easier short-term trading, particularly with water shares
- Also potential for ‘farming of water’ under Water Shares
- Key area of drought and S57 still to consider
  - This will include examining abstraction controls at low flow; and
  - How far trading helps deal with low flows.

# .... So what now?

- Consultation period ends 28<sup>th</sup> March 2014.
- Following that Governments need to make decisions prior to legislation post 2015 Election
- Implementation around 2020s



# Questions?



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