



Water - an economic resource

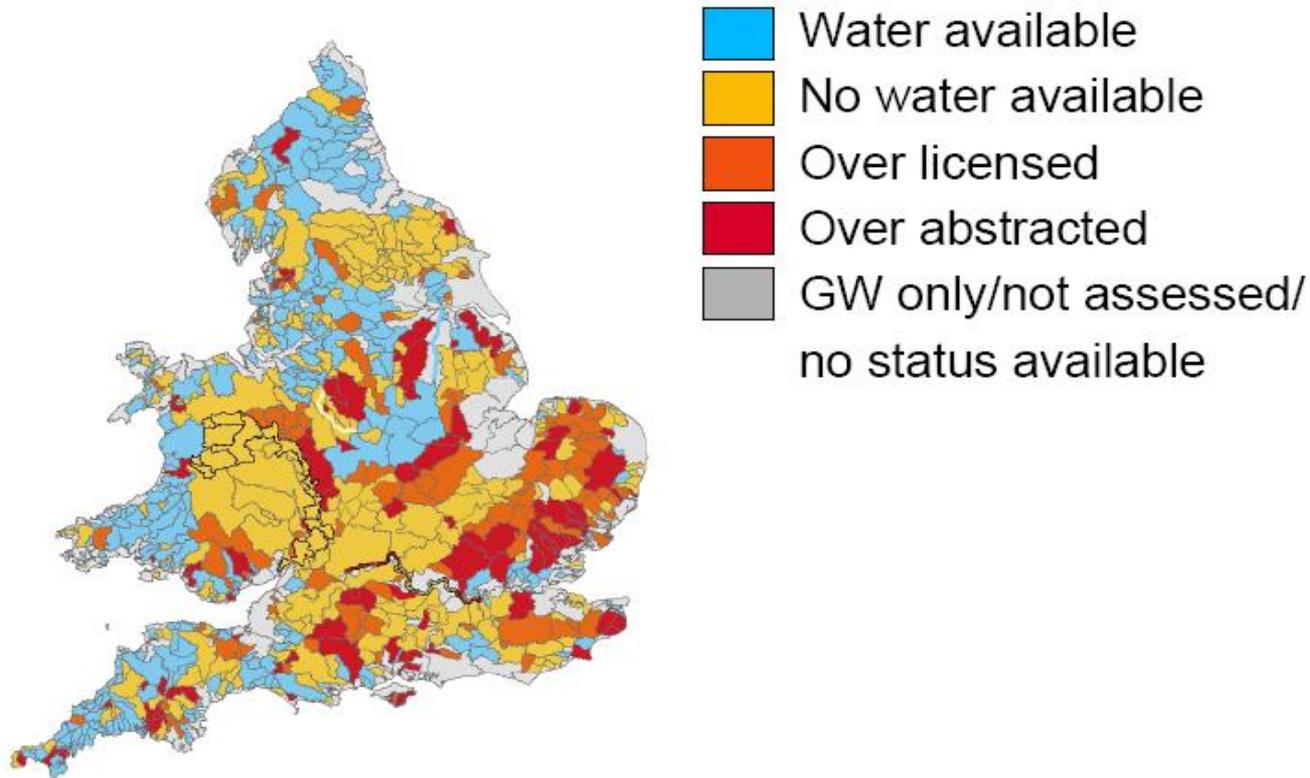
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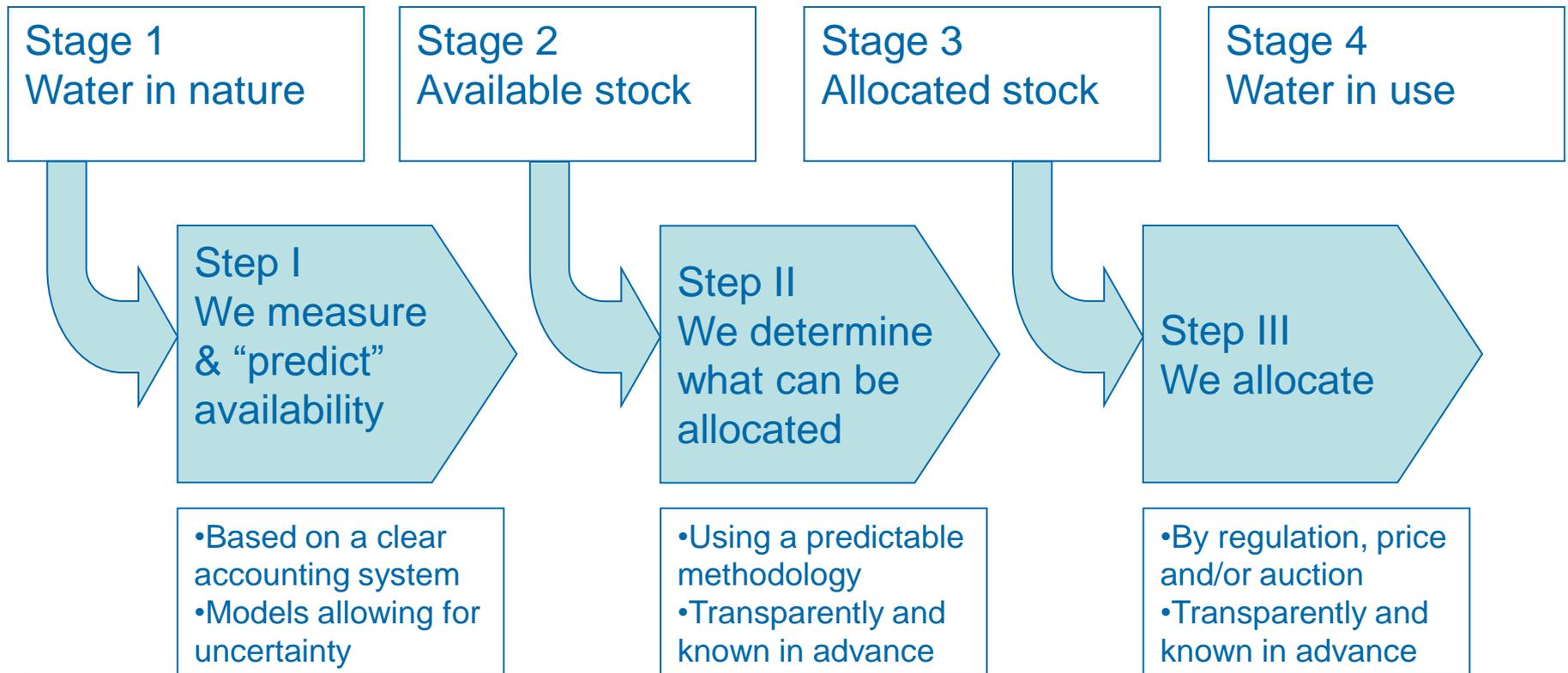
The Challenge

- ➔ Coping with the extensive over-abstraction of water
- ➔ Effective allocation of water resources, particularly in water stress areas
- ➔ Allowing water companies to share (scarce) water resources effectively
- ➔ Dealing with uncertainty in water supply due to Climate Change



The water supply chain

We need a conceptual model of the steps we take in allocating water



The Present Licensing System

PROS

- ➔ This system was fit for purpose when first introduced in 1963 (promoted economic growth)
- ➔ Gives some certainty (but not security) to water abstractors on the amount of water they can use
- ➔ Environmental protection is built into the system (CAMS)

CONS

- ➔ This System is not flexible enough to accommodate both future demand and the effects of Climate Change
- ➔ Any change to the current allocation entails a cumbersome and costly administrative process
- ➔ It treats unequally historical users (licences are in force until revoked) and new abstractors (e.g. time limits and hands-off flows)
- ➔ Few incentives to use water wisely

- ➔ Our aim is to reform the existing system to ensure that we protect the environment while at the same time, creating favourable market conditions for investment, trading and competition.
- ➔ The present system allows trading of bulk water as well as abstraction licenses.
- ➔ How can we apply market forces to water in a way that makes it easier to achieve these goals?

Allowing water to be an economic resource

Water is like utilities like electricity and gas in many ways. However the differences need to be recognised and reflected in future systems.

Water is a variable and unpredictable resource, so we need:

- An accounting system to determine present availability
- Models to clearly map future availability within different levels of certainty
- Models to show what is needed to protect the environment

Issues:

- The environment's need for water may also vary over time
- The environment is more sensitive in some places than in others
- Water is also returned to the environment – how do we reflect this?

What is left can be allocated to potential users:

- At today's known levels of availability
- At future possible levels of availability, albeit with less certainty

Rules & Prices

If we can define water in a way that makes it easier to trade, then we will need rules (to facilitate the market) and a transparent price

- ➔ Clear allocation rules could include:
 - ➔ rates of depletion and recharge;
 - ➔ how far and to where it can be moved, etc

- ➔ The price for accessing that stock must be posted
 - ➔ This could be a shadow price
 - ➔ But a real locational price is preferable
 - ➔ It should vary at least by season
 - ➔ But could be considerably more sophisticated
 - ➔ And what about the price for returning water to the environment?

- ➔ We want to make sure that all potential water users
 - ➔ Know what is available
 - ➔ With certainty that is appropriate to the short, medium & long term
 - ➔ And can plan appropriately

Conclusions

- ⇒ A water market can help further protection of both the environment and future water availability
- ⇒ It will rely on a clear distinction between
 - ⇒ Water as an environmental resource
 - ⇒ Water as a resource to the economy & society
- ⇒ And on clear signals in the market
 - ⇒ To use water efficiently
 - ⇒ Take it from the most appropriate places in the environment
 - ⇒ Plan effectively for the future

Thank you

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