



Too much water, too little water what to do?

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Too much water too little water





Overarching aims and objectives

- Water for people, the environment, agriculture and business
- Focus on outcomes not processes
- Optimise investments to improve the health of water bodies, habitats and wildlife
- Create a better place for people and wildlife
- Understand the cost benefit and effectiveness of various policy and operational interventions at a catchment level and willingness to pay
 - what interventions, where, deliver most benefit
 - how best to invest public money for public good





Rediscovering the catchment approach



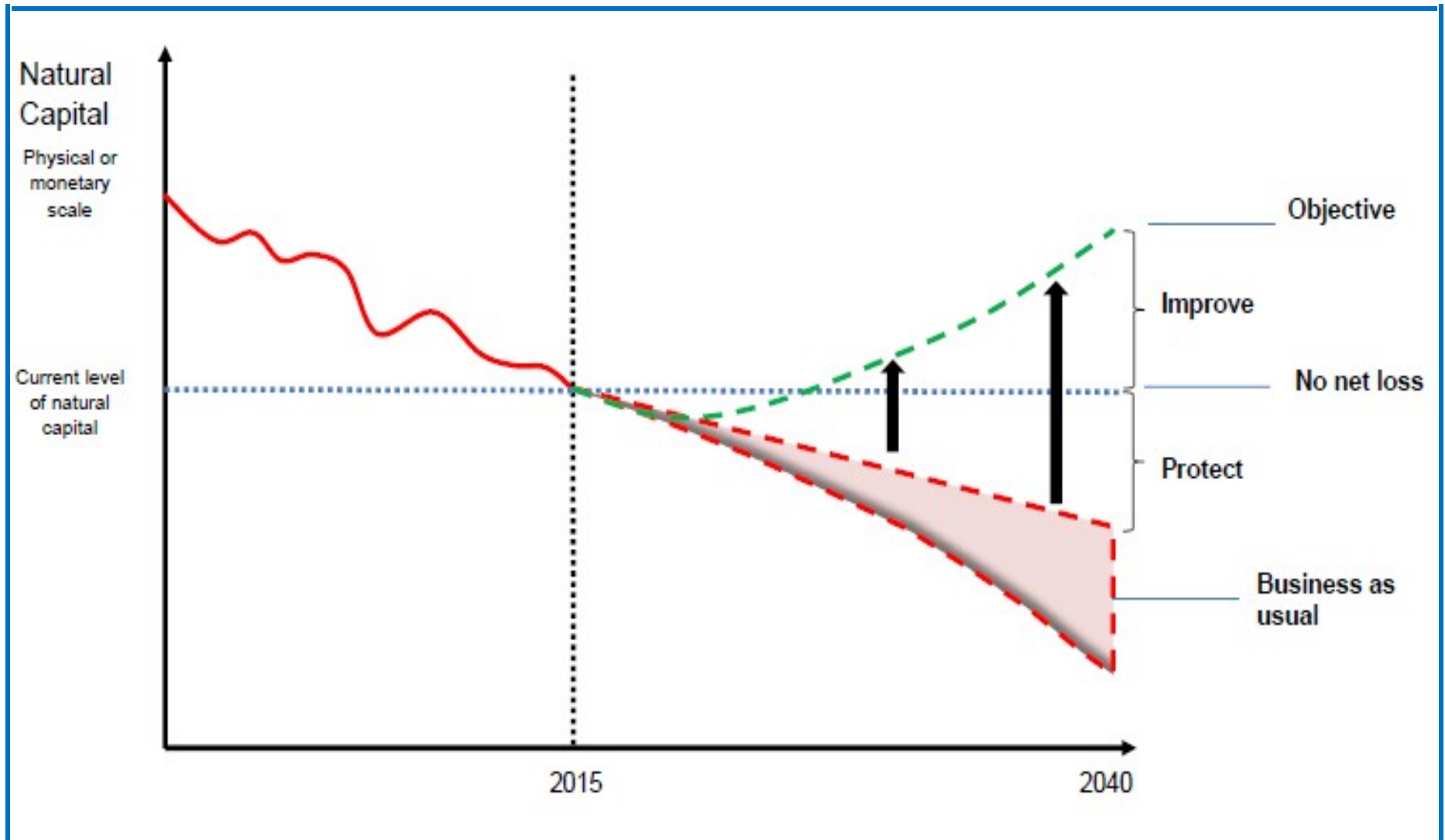
- LEAPs
- Governance and agreed aims
 - coordinated
 - cooperative
 - pooled resources
- Integrated approach
 - too many take a partial view
- Operating at the most effective level locally and nationally to address a particular issue





Protecting and improving natural capital over a generation – a stylised interpretation

Natural Capital Committee third report





Chemistry – an indicator of exposure and change

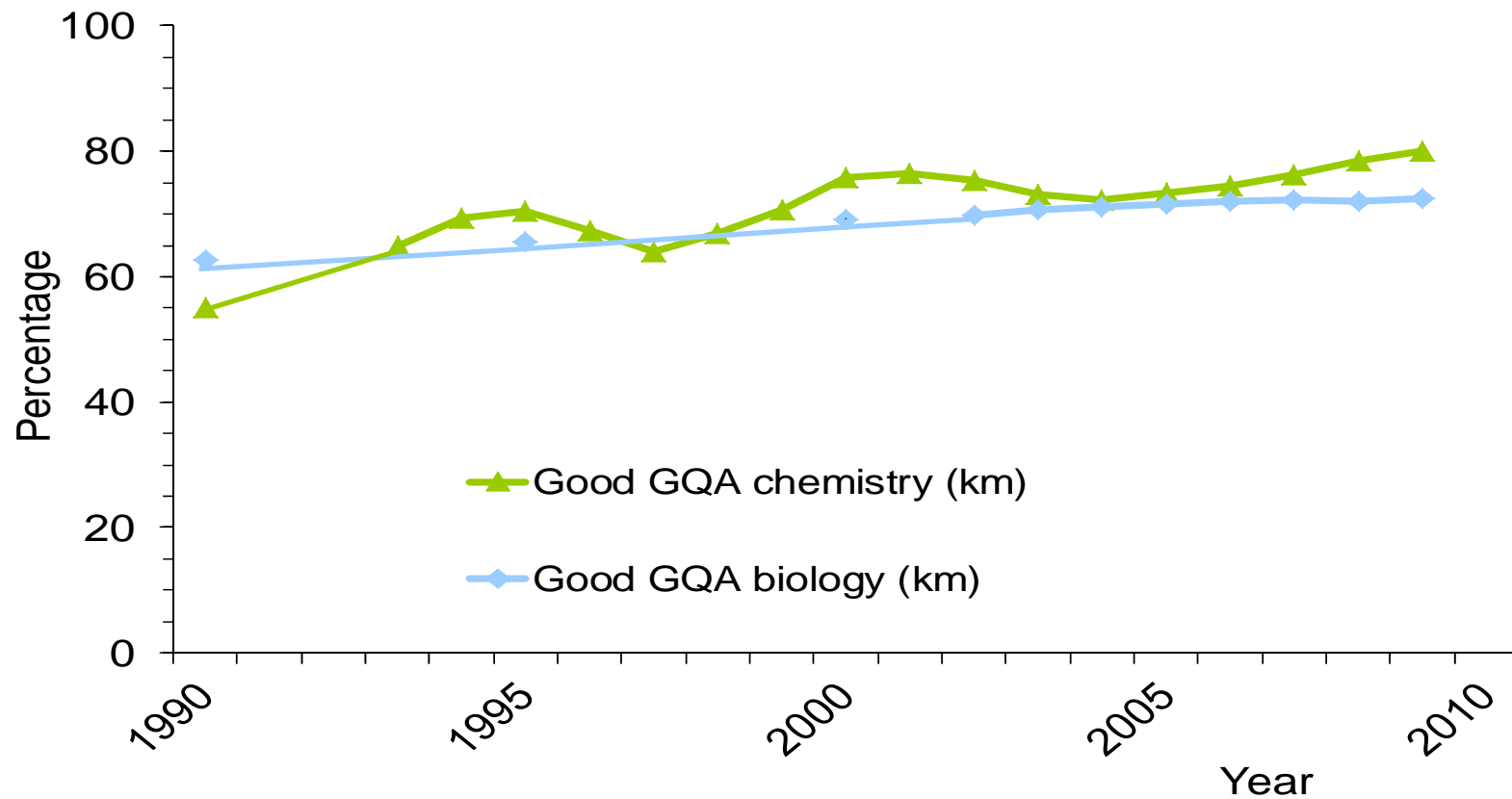


Biology – an indicator of health



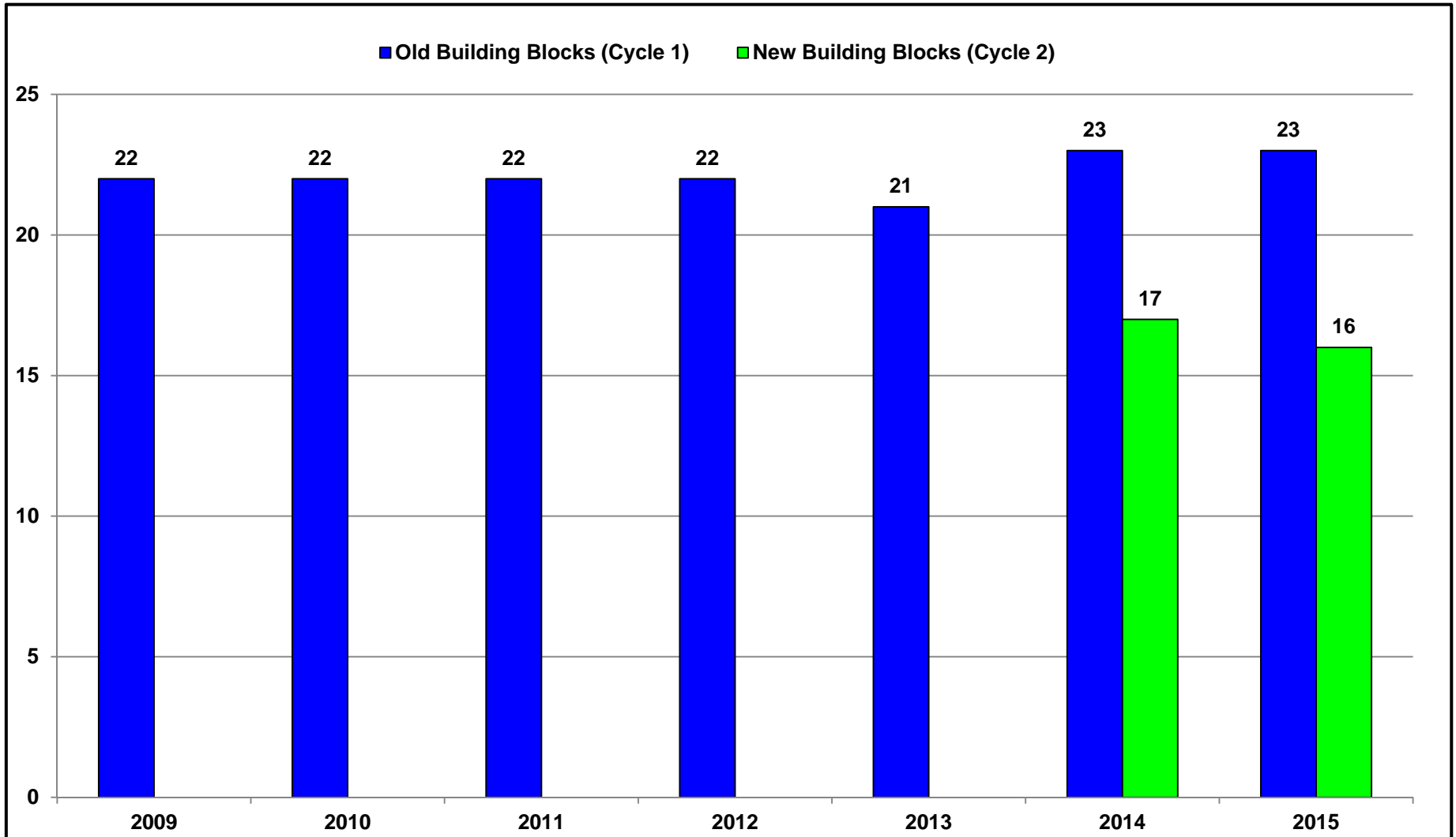


Remembering the context: General Quality Assessment status of rivers in England





Water quality: percentage of rivers in England at good ecological status / potential using old and new Water Framework Directive classifications





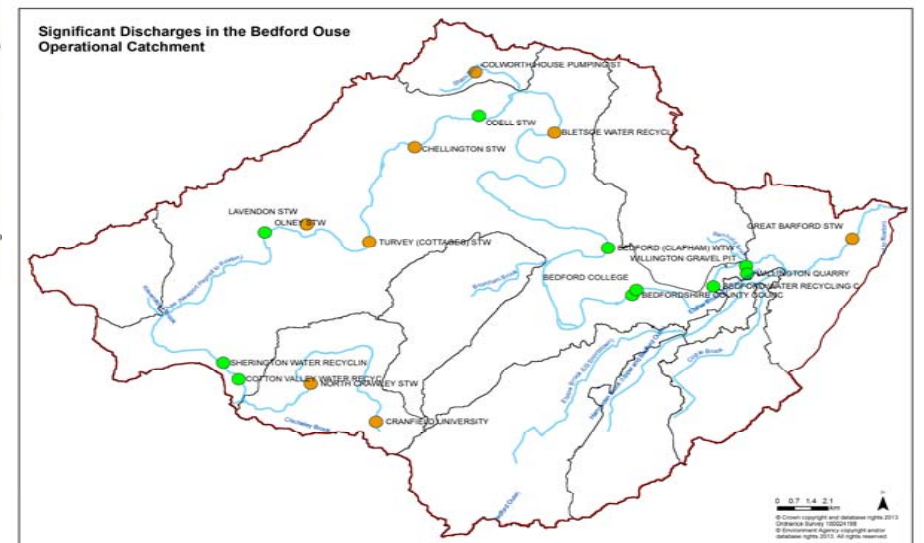
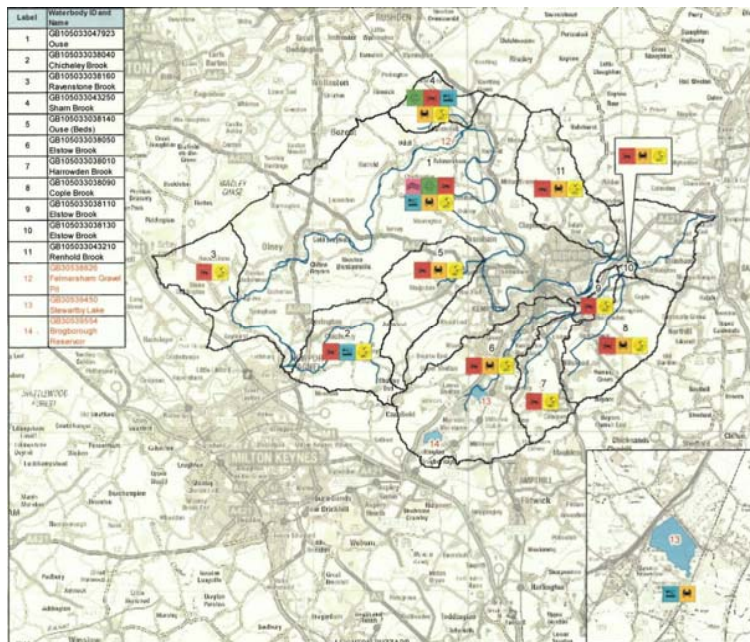
Understanding catchment pressures engagement and communication challenges

- Scientific uncertainty
- Competing cultural values
- Long term entrenched positions
- Often a disconnect between the beneficiary and the affected community
- Engagement and participation
- Quantity trumps clarity
- What's in a word
 - sustainability, natural capital, ecosystems services, phenology, petrichor



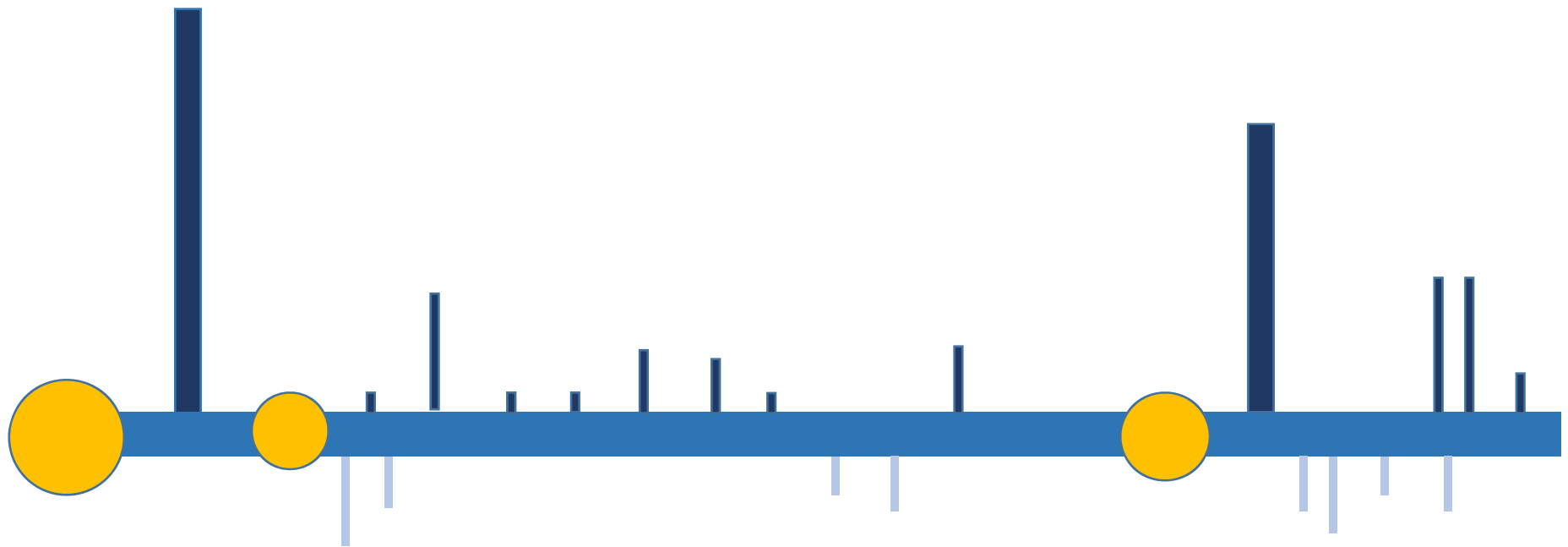


Understanding catchment pressures





River tube map (PRTM)



City / town



Main river water body



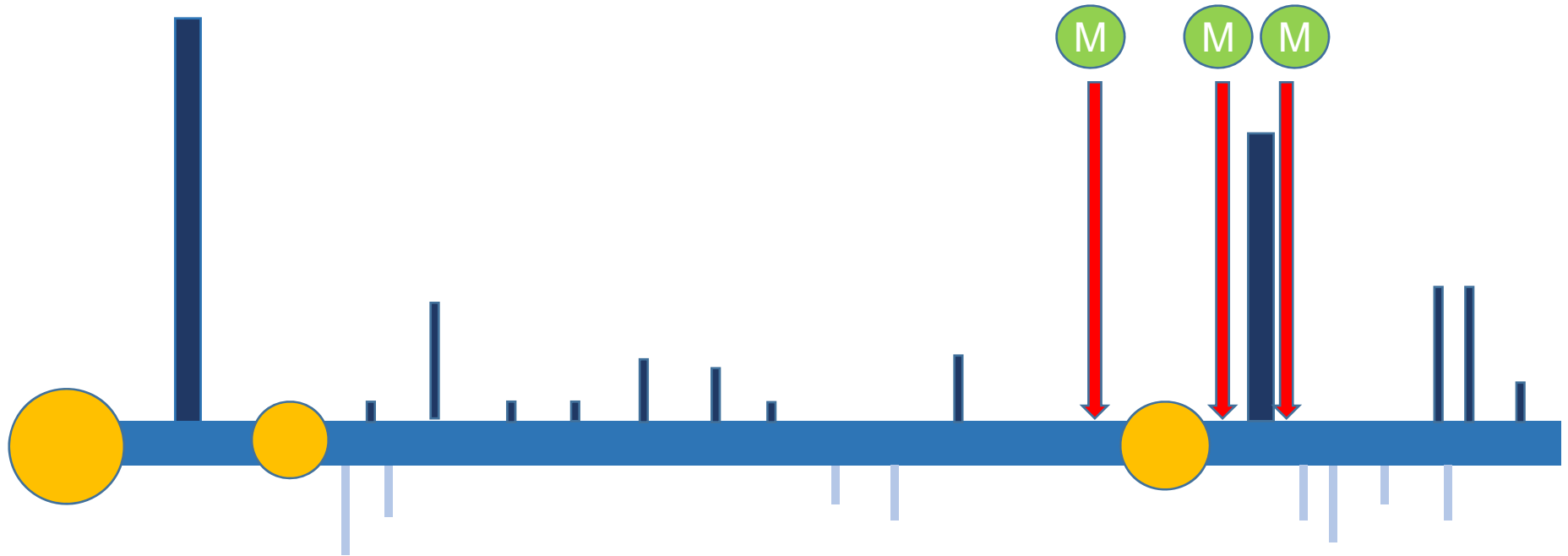
River water body



Sewage treatment works discharge



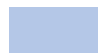
River tube map



City / town



Main river water body



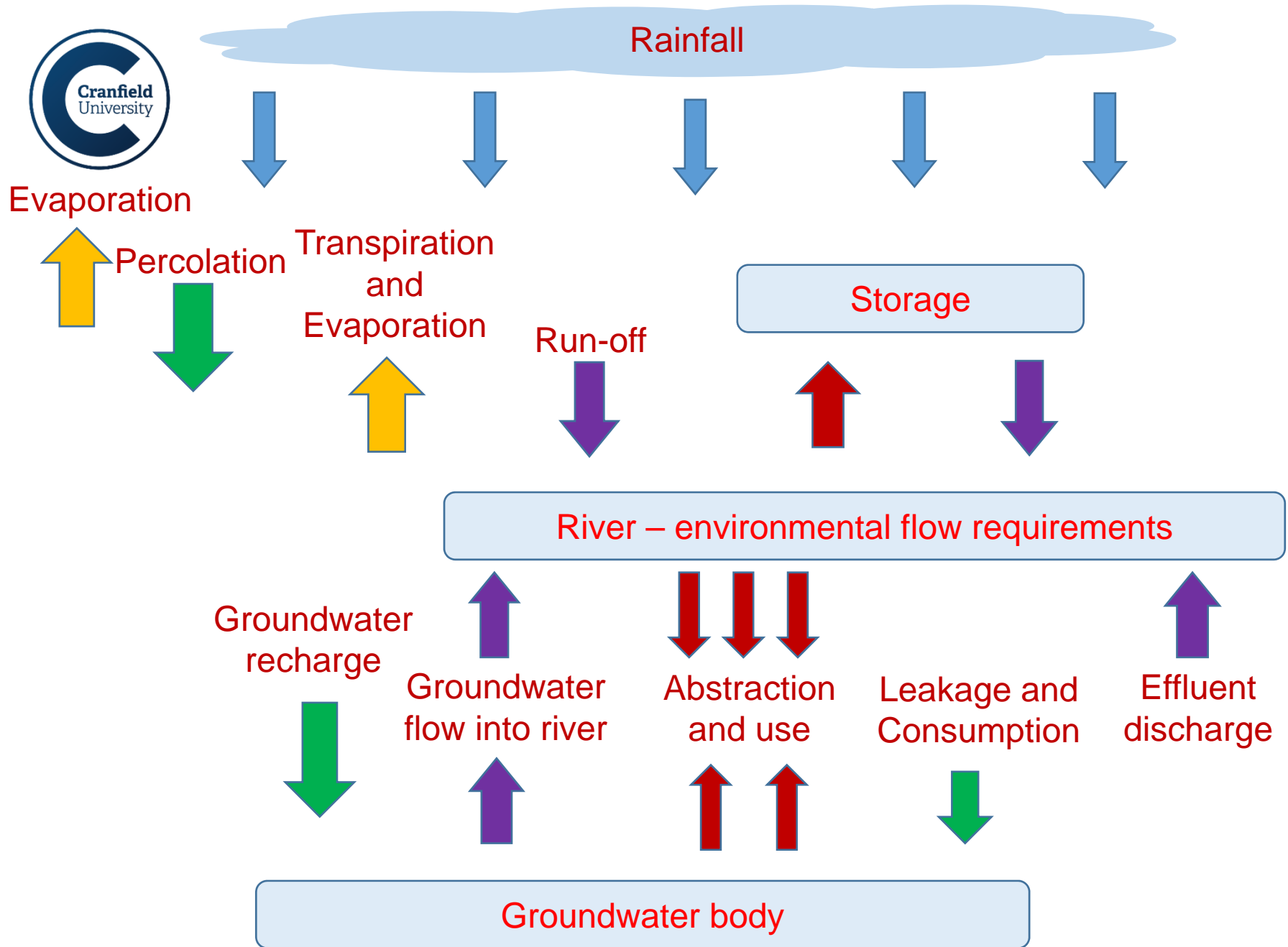
River water body

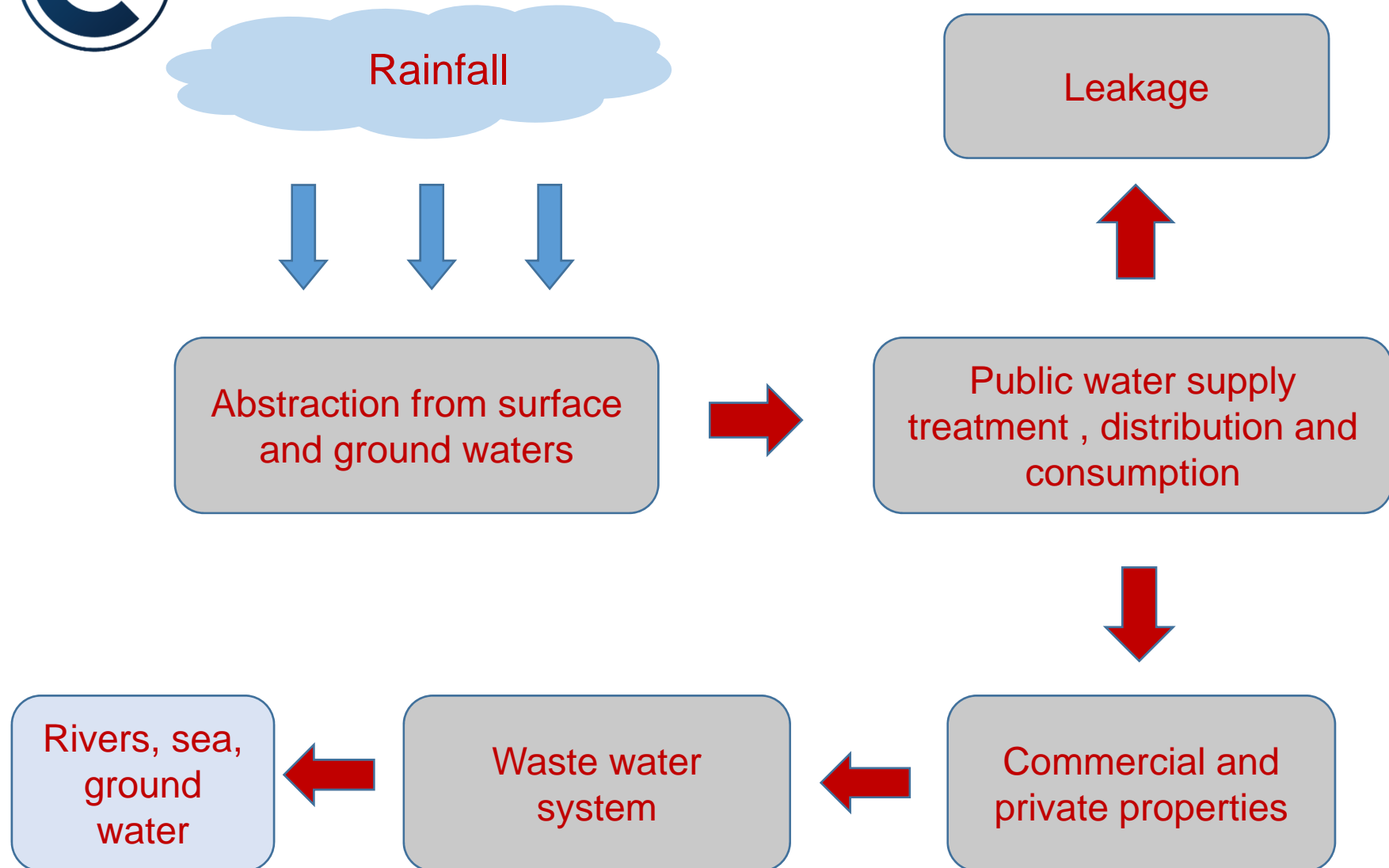


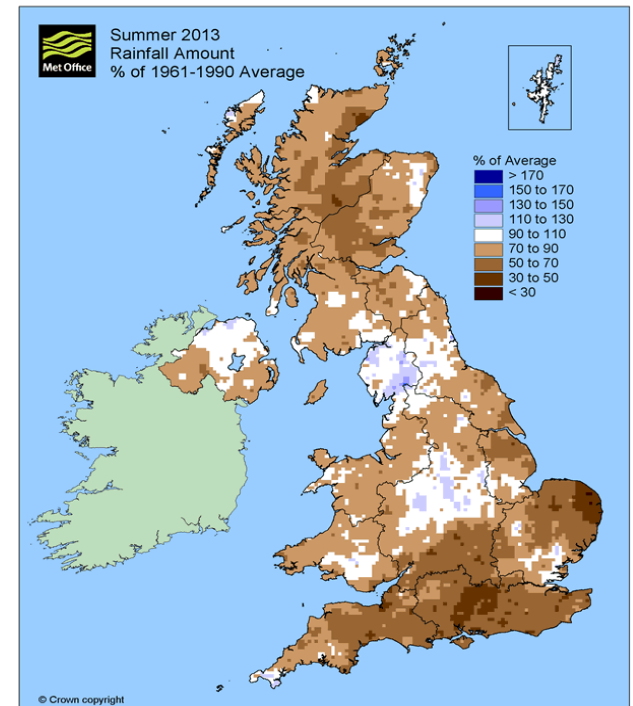
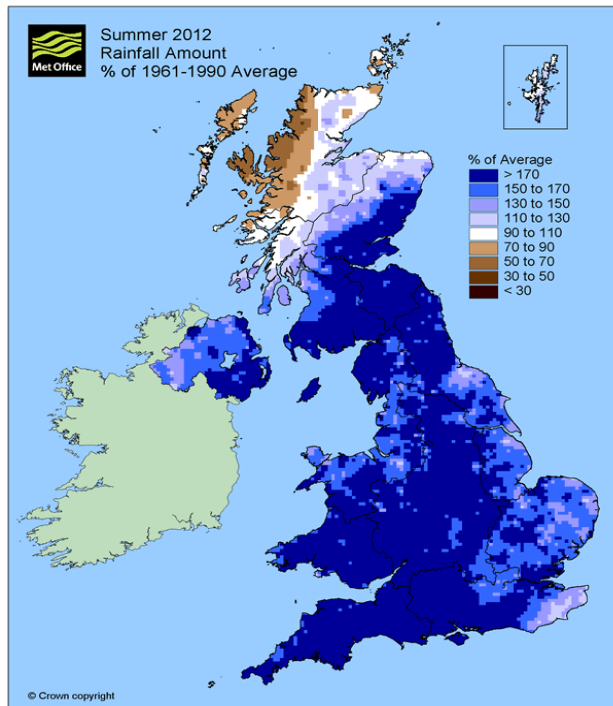
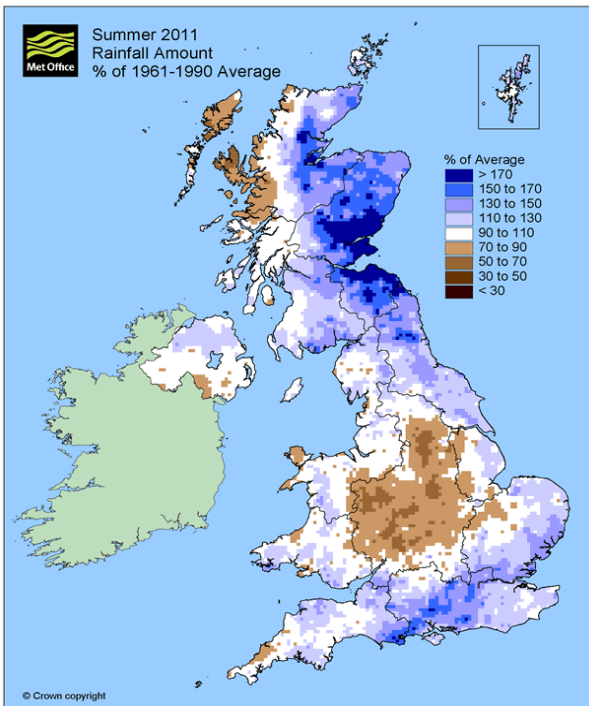
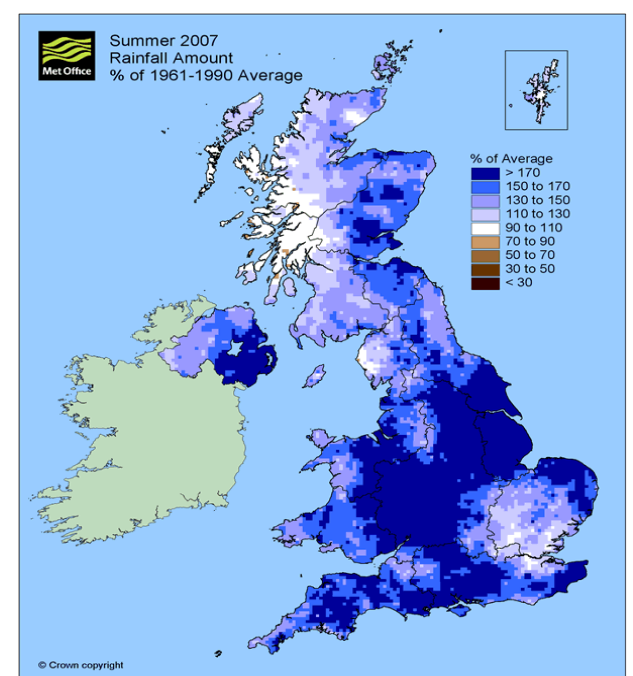
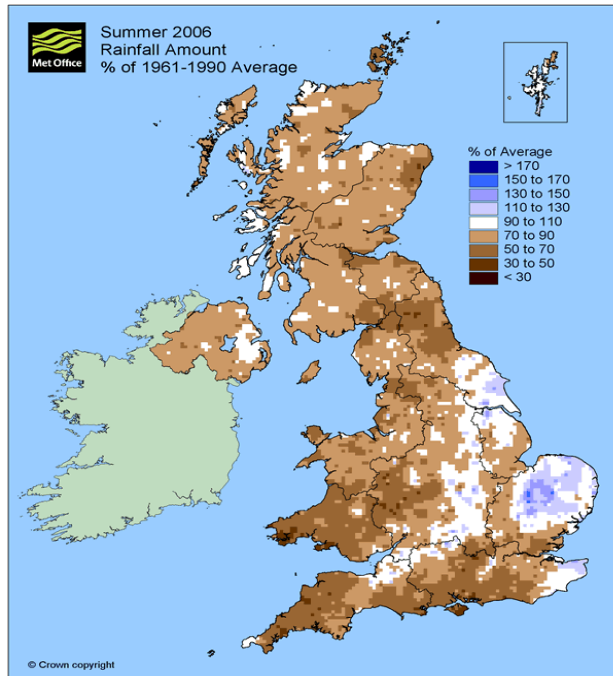
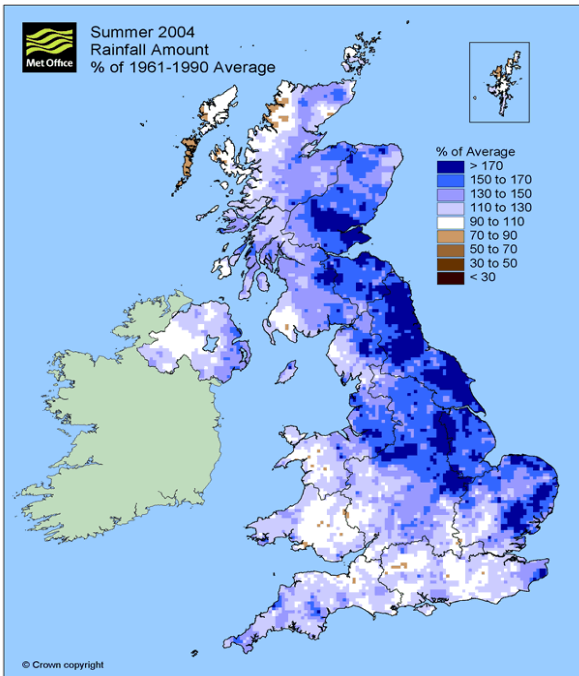
Sewage treatment works discharge



pH, ammonium,
phosphate,
temperature,
chlorophyll,
conductivity, turbidity,
dissolved oxygen







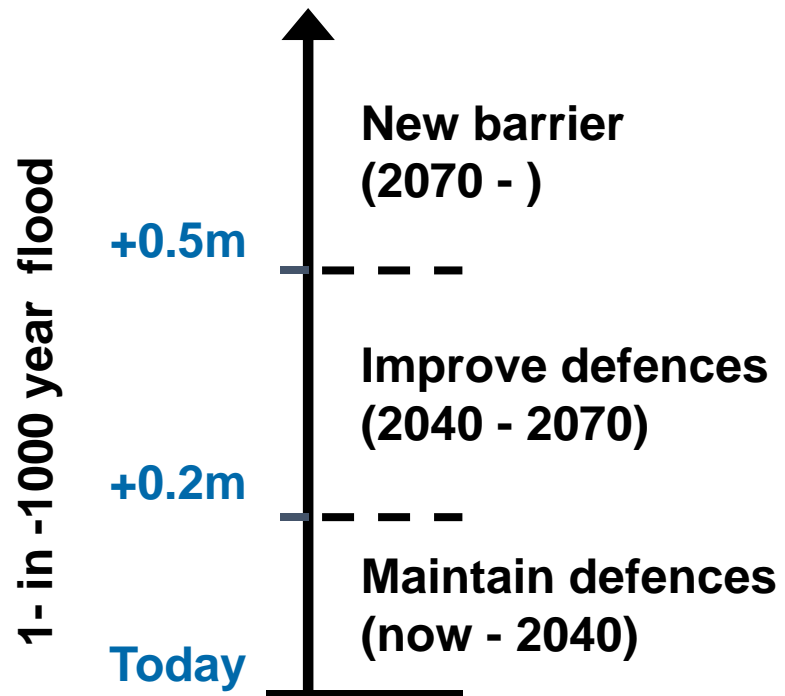
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*'We've had a month's worth
of abuse in less than 24 hours'*

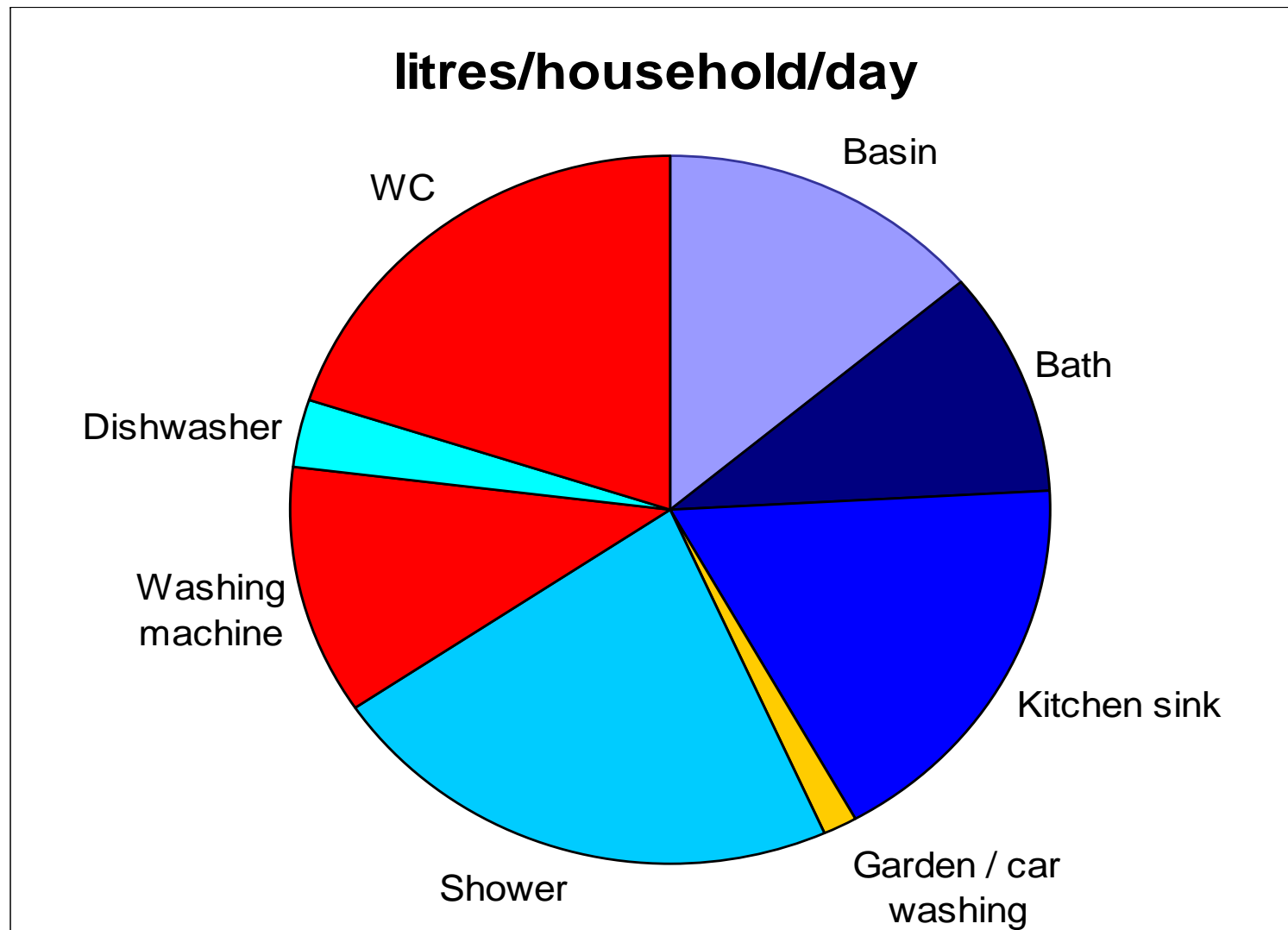


Thames Estuary: a managed adaptive approach





What sort of water is needed?





Planning for the future

