

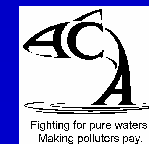
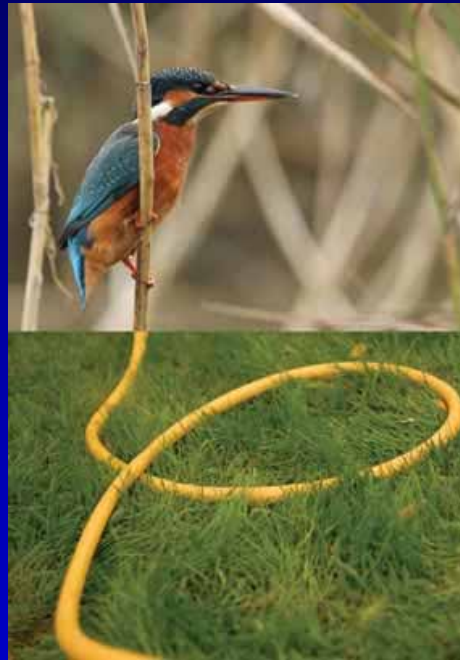


The environmental 'dividend' of water efficiency

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State of the water environment

- 95% of water bodies 'at risk' of failing to meet WFD good status objectives
- Up to 400 nationally and internationally important wildlife sites at risk from water abstraction
- 68% of river SSSIs, 47% of fen/swamp SSSIs, 37% of grazing marsh SSSIs in 'unfavourable condition'
- Wetland bird species of highest conservation concern still in decline.....

65 %



47 %



40 %



Wetlands are Impoverished and stressed..

Trends in water use

- **Rising household demand**
 - 3% increase between 2000 and 2005 (up to 11% in parts of southern England)
- **Increased input of water into supply**
 - Extra 395 million litres per day in 2005 compared to 2000
- **Increased number of households**
 - 150,000 to 300,000 per year for 15 years
 - Extra demand of up to 1,705 million litres per day

The environmental impacts of rising demand

- Low or no flow rivers
- Depletion of groundwater resources
- Drying out of groundwater dependent wetlands
- Constraints on UKBAP wetland targets & long term vision for wetland creation
- Loss of freshwater flow to important coastal wetlands





The environmental impacts of increasing supply

- More reservoirs = more river regulation, potential damage to headwaters & downstream wetlands
- Grids and transfers = threatening fragile water dependent habitats in northern England and Wales
- Desalination
 - Energy use?
 - Cost?



Water efficiency - limiting the threat from rising demand

- Accept environmental limits to abstraction
- Build new homes to the highest levels of the Code for Sustainable Homes where ecosystems are threatened
- Make new developments “water neutral”
- Fund major programmes in PR09 to replace water inefficient fittings in existing buildings and accelerate action on leakage
- Full metering by 2015 in southern and eastern England, supported by tariff schemes that protect the vulnerable but penalise waste.

Environmental benefits from water efficiency

- More water left in rivers and wetlands
- More water available for rebuilding biodiversity
- Reduced need for damaging abstractions
- Reduced need for potentially harmful development of new resources
- Less energy used in treatment & distribution



Protecting What We Have:

Shared Problems: Environmental Degradation = Loss of Biodiversity and Risk to Water Resources

- **Contamination from intensive agriculture (nitrates/pesticides)**
 - Up to 1,800 million litres per day of public water supply may be restricted or lost by 2020
 - Degradation of the environment and loss of biodiversity including birds.
- **Drainage and erosion in the uplands of England and Wales**
 - Huge increase in peat coloration and sediment
 - Degradation of the environment, loss of biodiversity and climate change impact (sink to source)







Protecting what we have: *Shared solutions*

- **Protecting and restoring ecosystem services by dealing with the source of the problem**
- **Bringing multiple benefits**
 - Reduced risk of raw water contamination
 - Healthier habitats rich in wildlife
 - Reduced carbon emissions from end-of-pipe approaches.
 - Better value

Water Framework Directive: *A force for change*

The WFD requirements:

- Make assessments of water availability which include the needs of the environment
- Protect sources of supply, preventing contamination and increasing quality of water bodies
- Prevent development of new water supply that would be ecologically damaging unless tests of overriding public interest are met.

Conclusions

- **Protect the existing resource**
- **Reduce water use, re-use, recycle and meter**
- **Plug the leaks**
- **Restore catchments to provide ecosystem services - for water and biodiversity.**