

Water Security

The science of smarter regulation – NERC research creates UK benefits worth billions

Water is an invaluable resource. It is also big business: the water industry contributed over £9.8bn to the UK economy in 2014. Safeguarding the quality and availability of drinking water is absolutely critical. Regulations such as the European Union (EU) Water Framework Directive (WFD) play a pivotal role.

WFD water quality standards help to protect and, where necessary, enhance the quality of water resources – benefiting consumers, businesses and the environment.

NERC science has played a key role in setting the WFD water quality standards before and after the Directive was introduced in 2000, ensuring that every revision has been based on robust, reliable science.

Our scientists have enabled government regulators to balance the compliance burden on water companies with the non-monetary benefits we derive from natural ecosystems. NERC science has also helped to shape UK River Basin Management Plans, which implement the WFD at local level and describe how organisations, stakeholders and communities work together to improve the water environment.

Investment

Every year NERC invests around £65m in freshwater-related research.

£65m

annual NERC investment in this area

£5.5bn

UK net benefits from cleaner water

£7bn

cost savings for business



tuachanwattana/istockphoto.com

Impact

NERC research has led to economic and environmental benefits for the UK by helping to strengthen regulation while avoiding disproportionately expensive requirements. NERC-commissioned analysis by Deloitte estimated that our research contributed up to:

- **£5.5bn in net UK benefits from cleaner water from 2015 to 2051:** by helping to improve WFD regulation, NERC science will enable the UK to secure present value benefits from cleaner water (£24.1bn) that outweigh the compliance costs to the private sector (£18.6bn).
- **£7bn in savings for the UK water industry:** compared to the previous River Basin Management Plans, the latest implementation of these plans led to billions of savings for the water industry by scrapping WFD compliance schemes that cost too much for the environmental benefits they deliver.

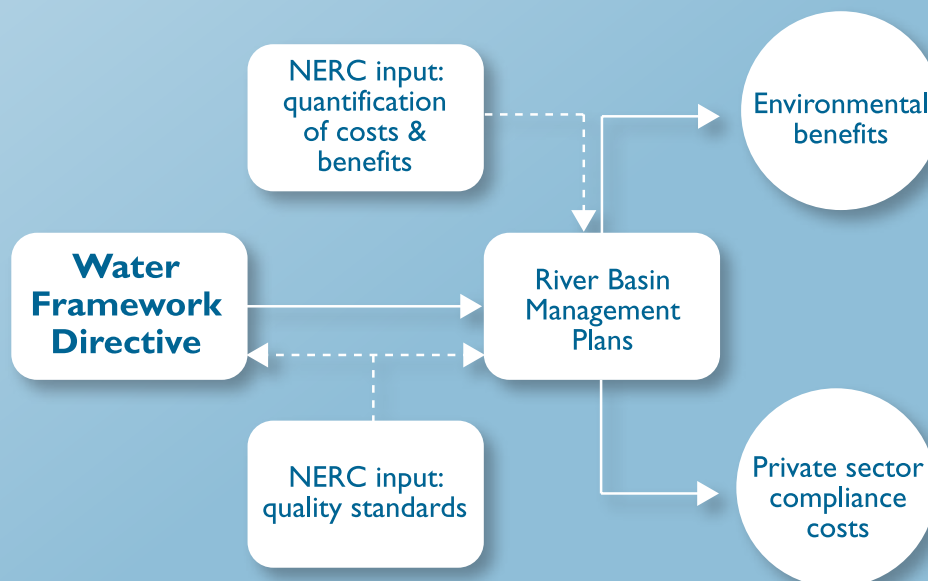
A question of quantity

NERC science also helps to provide a sufficient and secure supply of water for public and business use in a changing and challenging environment.

Through innovative research and by generating high quality data, NERC **supported planning and decision-making by the Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency** on the regulation of water extraction ('abstraction') from water sources.

For example, the NERC **Future Flows and Groundwater Levels** project enabled Defra and the Environment Agency to predict the quantity of water that will exist nearly a hundred years into the future – helping water companies and abstractors to reach decisions on supply for the coming decades.

“NERC’s involvement provided a high level of confidence in the science behind the data. This means users know that any subsequent work is based on high-quality, reliable analysis.”
Environment Agency



NERC's contribution to water quality via the Water Framework Directive (WFD).