

CASE STUDY

USING NATURE-BASED SOLUTIONS TO TACKLE WATER POLLUTION

This case study details how South West Water works in collaboration with farmers, government organisations, local groups, and NGOs to improve water quality.

About the company

South West Water provides reliable and efficient drinking water and wastewater services throughout Cornwall, Devon, the Isles of Scilly and in small areas in Dorset and Somerset. When the water industry moved out of the public sector, South West Water inherited a system of reservoirs, treatment works, water mains and sewers that were outdated. Since then, they have invested £9bn in the region's infrastructure and treatment works, to modernise water services and protect nature for future generations.

The issue

Much of the drinking water in the West Country is sourced from surface water (that is rivers, streams, and reservoirs). However, these must be treated by South West Water to meet drinking water standards. Farming impacts water quality due to the release of nutrients and chemicals, but also soil erosion. In the UK, it is thought that 75% of nutrients and sediments polluting water bodies are from farming.ⁱ



What South West Water did

In collaboration with a group of regional conservation organisations, South West Water established Upstream Thinking – one of the largest and most innovative conservation projects in the UK. It aims to ensure potential sources of pollution are prevented from entering surface water, thus reducing the ongoing level of treatment. This in turn reduces associated chemical and energy use. Founded in 2006, the project has successfully restored and protected around 91,000 hectares of land in the region. The initiative involves working with the agriculture industry to ensure potential sources of pollution are prevented from entering rivers.

"IT REALLY IS A PROGRESSIVE WAY FOR A WATER COMPANY TO BE OPERATING. WE'RE LOOKING TO DELIVER NATURE-BASED SOLUTIONS TO IMPROVE WATER QUALITY WHICH

ALSO PROTECT AND ENHANCE THE ENVIRONMENT ALONGSIDE OUR BROADER ENGINEERING INVESTMENT”

Morag Angus, Mires Manager, South West Water

Since its start, South West Water has worked with 1,700 farms, covering 80% of its catchment areas, and provided grants to farmers to invest in their own infrastructure to improve river quality.

Delivering multiple benefits

As well as improving water quality, the programme also delivers multiple benefits through its broader focus on restoring wetlands. These benefits include:

- Improved biodiversity: improving water quality and restoring wetlands allows wildlife to recover. Fish and invertebrates are more likely to breed and thrive in cleaner water, providing a food source for otters and kingfishers.
- Sustainable agriculture: by working directly with farmers to prevent water pollution, the programme makes farming practices more sustainable. In the long term, this will provide food and water security in a safe and fair way.
- Tackling the climate crisis: restoring peat bogs enables the natural storing of carbon which reduces the impact of greenhouse gas emissions. Improved water quality also reduces the energy needed to treat surface water.
- Climate resilience: restoring peatlands on Exmoor has resulted in a third less water leaving the area during periods of heavy rainfall. Improved moorlands can also improve flood resilience across the region.

Collaborative working

All of the impacts and outcomes associated with Upstream Thinking could not have been delivered without working in partnership with farmers, conservations groups, and local communities.

The programme is delivered in partnership with Westcountry Rivers Trust, Devon and Cornwall Wildlife Trusts, South West Lakes Trust, Catchment Sensitive Farming, FWAG South West and the University of Exeter.

The South West Peatland Partnership is supported by a wide range of organisations and individuals. It also has help from local volunteers.

The partnership is delivering peatland restoration

IMPACTS AND OUTCOMES

- Around 91,000 hectares of land in region has been restored.
- South West Water has worked with over 1,700 farms, covering 80% of their catchment areas.
- Over 3,000 hectares of peatland have been restored which help to boost nature, reduce flooding, and improve water quality.
- Potential increased water storage in the peats of around 260,000 cubic metres.

on the uplands of Cornwall, Dartmoor and Exmoor. This £13million project has funding from South West Water, Natural England, the National Trust, the Environment Agency and Duchy of Cornwall.

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ENDNOTES

ⁱ Global Food Security (2015), Agriculture's impact on water quality, available here: <https://www.foodsecurity.ac.uk/publications/>