PROWATER: South East England

Protecting and Restoring Raw Water Resources through Actions at the Landscape Scale

Interreg 2 Seas Mers Zeeën PROWATER
European Regional Development Fund

Project Background

Climate change will lead to **hotter, drier summers and wetter, warmer winters** in England. Increased flood risk **and higher likelihoods of drought periods** are expected. The availability and quality of raw water depends on regional climate, geology and land use. In South East England, the majority of drinking water comes from **groundwater resources**. These also feed globally rare **chalk streams** and so support not only a rapidly growing population but also important biodiversity. The landscapes connected to them are often characterised by the chalk which plays a crucial role in how groundwater bodies are recharged. Groundwater, as well as rivers in the area, are often already heavily abstracted and facing future pressures:

- **Urbanisation** resulting in sealed surfaces and rapid runoff
- **Climate Change** impacting rainfall patterns and recharge seasons
- **Housing development** increasing demand and pollution

Project Duration

09/2018 - Start → 2019 - Spatial tools D&T → 2020 - Long term vision, measure design → 2021 - Delivery & quant. → 2022 – Final outputs

Key Outputs

- GIS-based targeting and impact quantification tool
- 3 pilot sites (increase raw water availability & multiple benefits)
- Payments for Ecosystem services scheme
- Long term vision & policy recommendation on implementation of ecosystem-based adaptation measures to climate change & PES schemes

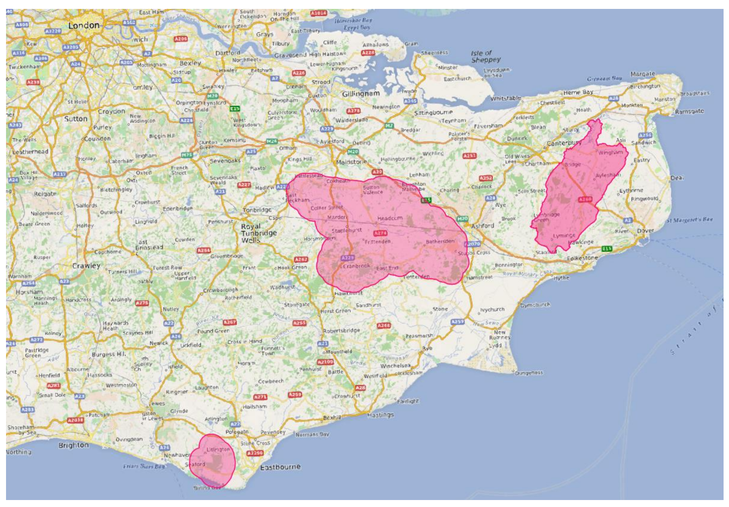
Regional Partners:
South East Rivers Trust
Kent County Council (incl. Kentish Stour CP)
South East Water

Regional Observers:
Southern Water
SES Water
Affinity Water
Natural England

Funding:
European Regional Development Fund (60%) - € 889,547 in the SE Region

South East England Pilot Areas

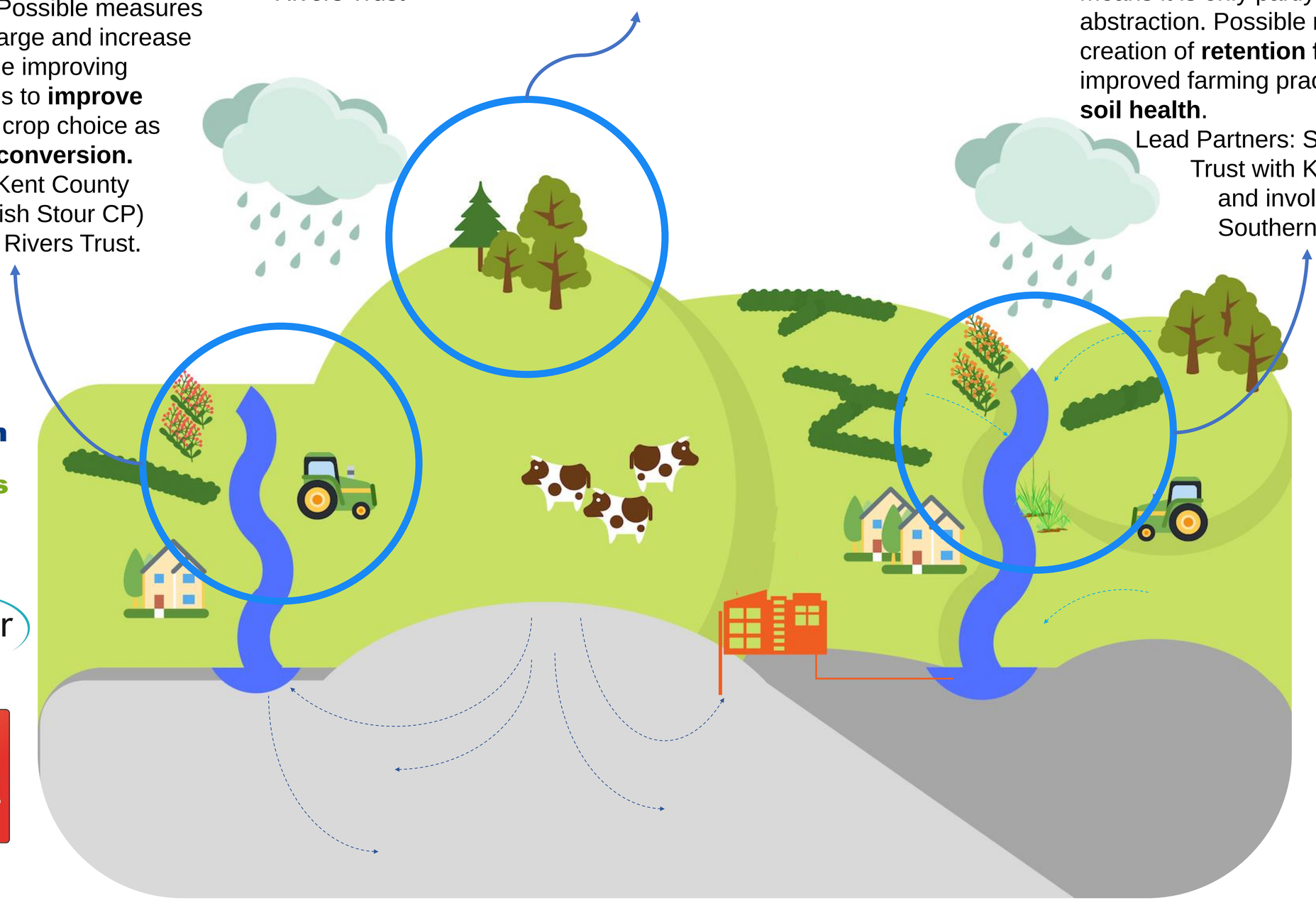
To protect and restore water resources, actions at the landscape scale to **increase recharge potential and protect habitats** are necessary. Land use impacts the delivery of clean water and other ecosystem services. Land management decisions need to take these into account, making trade-offs explicit. A **Payments for Ecosystem Services** scheme will increase uptake of adaptation measures by allowing providers of Ecosystem Services to be compensated or incentivised by those benefitting.
Measures will be delivered in 3 pilot areas in South East England to proof the concept of increasing infiltration and providing multiple benefits through ecosystem-based adaptation measures. They will be based on the spatial targeting tool developed in the project and the long term vision built with beneficiaries and providers of the ecosystem services.



The **East Kent Chalk** aquifer, part of the North Downs chalk block, provides drinking water as well as baseflows to the Little Stour (focus of the pilot). Arable farming and horticulture are key land use types in the catchment which suffers from low flows. Possible measures to improve recharge and increase resilience include improving farming practices to **improve soil health** and crop choice as well as **habitat conversion.**
Lead Partners: Kent County Council (w Kentish Stour CP) with South East Rivers Trust.

Friston Forest is owned by South East Water and managed by the Forestry Commission. The area, sitting on top of the chalk aquifer, was planted in the 40s to increase rainfall. It was later found that the pine forest reduces recharge as it intercepts precipitation. Options **are conversion of remaining coniferous areas** into **broadleaf forest** or **chalk grassland**, reduction of forest cover and creation of **attenuation features** to increase recharge again. Lead Partners: South East Water with South East Rivers Trust

The **River Beult** is a tributary of the Medway and runs through a clay catchment. As such, it provides little recharge to the aquifer and contributes mainly to surface water abstraction downstream. Rapid runoff affects water quality, and the timing of discharge means it is only partly available for abstraction. Possible measures include creation of **retention features** and improved farming practices to **improve soil health**.
Lead Partners: South East Rivers Trust with Kent County Council and involvement from Southern Water.



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