NERC science benefits people, economies and the environment across the UK

Our science delivers real benefits in every region of the country by providing solutions that inform action, build resilience and foster a healthy environment and economy1.

Why it matters

Boosting the UK economy means unlocking the full potential of every region in the country. The government recognises the key role of research and institutional strengths in creating productive and resilient local economies.

What we did

NERC invests in outstanding research and innovation throughout the UK (see map below). Our work with business, government and wider society delivers solutions that help inform action, build resilience and foster a healthy environment and economy.

The benefits are felt in every corner of the country. Real economic and environmental benefits that boost real lives – it’s a story of success summarised in the map below and the accompanying case studies (overleaf).

Map 1: NERC investment in universities and research centres in UK regions. £ per capita (2018-19).

Map 2: Dots show a selection of locations where NERC science has delivered benefits to the local area.

NERC’s impact in numbers

- 75% boost in profits at the port of Falmouth, Cornwall
- 90% saving in flood defence costs at Belford, Northumberland
- £78.6 million increase per annum from Scottish fish farms

Contributing to the UN Sustainable Development Goals

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NERC science delivers prosperity and wellbeing throughout the UK

Scottish Highlands
- £90,000 in road gritting costs saved by the Highland Council in one winter thanks to new ice forecasting method.

Northern Ireland
- UK renewables development boosted by the pioneering Strangford Lough tidal turbine demonstrator facility, after research concluded that the risk to marine mammals should be low.

North West
- £32m remediation programme including housing and leisure facilities in Northwich, Cheshire, facilitated by provision of crucial information on stabilising derelict salt mines.

Wales
- Bigger yields for the Menai Straits mussel farming industry resulting from research into the impacts of mussel fishing.

West Midlands
- Effective planning for Birmingham’s water supply included identifying the location for a new supply well valued up to £30m, supported by a hydrology model for the Birmingham Aquifer.

South West
- 75% boost in profits at Falmouth port in Cornwall, plus job creation and reductions in environmental impact, following advice from researchers on managing port operations.

London
- Prevention of flooding that would cost the local economy £94m per day, through expert input informing decisions on when to close the Thames Barrier.

Yorkshire and the Humber
- Millions of spend avoided by Yorkshire Water thanks to research highlighting the effectiveness of peatland management in tackling water discolouration.

East Midlands
- Growth of 40 local SMEs and £2.9m investment in the local economy enabled by working with businesses to support use of satellite data.

East England
- £3.6m in monitoring costs saved at UK offshore wind farms, including Scroby Sands, Norfolk, due to the discovery that offshore turbine pylons do not exacerbate coastal erosion.

South East
- UK renewables capacity boosted after approval for Gunfleet Sands Wind Farm, Essex was secured using cutting-edge software that confirmed environmental acceptability.

North East
- 90% saving in flood defence costs (£2.25m) at Belford, Northumberland, after expert knowledge of local hydrology highlighted the potential to use natural flood management features.

Investing for the future

We invest in infrastructure, people, research and innovation across the UK, delivering opportunities for place-based environmental solutions. The Regional Impact from Science of the Environment (RISE), for example, is a £12m programme driving regional economic development by bringing together research organisations, businesses, policymakers and the third sector. Four projects have been funded to date, in the South West, Yorkshire, West Midlands and London/South East.

1 For more detail, see pages 30-31 of NERC Impact Report 2017, available at: http://tiny.cc/37b4jz