

Press release: Fish stocks boost for endangered pearl mussel

Thousands of sea trout have been released into rivers in Northumberland to stock rivers for anglers and help protect the future of a critically endangered species, the freshwater pearl mussel.

Pearl fishing and water pollution from industry have led to worldwide decline of the pearl mussel.

A healthy population of endangered freshwater pearl mussels is important for water quality – each mussel filters 50 to 70 litres of water. They improve the quality of the habitat, increasing the ecological diversity, which includes juvenile trout and salmon numbers.

The Environment Agency's Kielder Salmon Centre staff Richard Bond and Jess Anson have developed a technique to enable pearl mussel larvae to attach to the fish gills, replicating their natural life cycle in the wild.

The larvae will drop off the sea trout gills towards the end of May where they will settle on to the river bed. Given the right conditions, these juveniles could survive into adulthood and live for up to 100 years.

Close up of pearl mussel larvae (white dots) attached to the sea trout gills

Around 12,000 one-year-old sea trout, which have been bred at Kielder Salmon Centre, were released this week into North Tyne tributaries of the River Tyne.

The larvae attached to them were harvested from 80 adult mussels which are cared for at the centre.

Kielder Salmon Centre breeds 360,000 salmon and between 10,000 and 20,000 sea trout every year to stock rivers.

Complex life cycle

Richard said:

The pearl mussel has a complex life cycle which begins as larvae. These larvae, called glochidia, requires salmon or sea trout to host them for the first stage of their development.

They attach to the gills of trout in the River Tyne between late July and early August, where they remain until the following spring when they drop off the fish's gills. They need clean water and gravel, and well oxygenated water where they continue to grow.

The survival rate for juveniles has declined over the years, which

has led to an ageing population, with few mussels under 50 years old.

This means they are a critically endangered species with only around 30,000 adult mussels in the wild in the North Tyne area, and 500,000 across the country.

This work at the hatchery is to try to increase the numbers of juveniles in the river, boost future numbers, natural reproduction and survival rates in efforts to halt the population decline.

Water quality improvements

After considerable investment, water quality has improved dramatically across the UK and rivers in England are the healthiest they have been for 20 years.

The improvements in water quality of the River Tyne and its tributaries has been excellent, and along with the continued work of the Environment Agency and partners, has resulted in improved conditions for natural breeding in the rivers, and a flourishing ecology.

[Kielder Salmon Centre pearl mussel project](#)

Richard added:

In 2010 we first managed to successfully get freshwater pearl mussel larvae to attach to the gills of sea trout. Since then we have released sea trout every spring to the River Tyne tributaries.

Over the next two years we will be carrying out surveys, looking for the first of these juvenile mussels that were released to see if or where they have survived.

Even at 7 years old they will be less than 3cms long, most of which will be buried under the river bed. In another 7 to 10 years they should be old enough to breed.

[**News story: Clean energy projects receive £24 million to keep towns warm**](#)

The £24 million is spread across projects from Sheffield to Somers Town, which will soon help warm homes and businesses with low carbon energy.

This is the first round of funding from a £320 million pot set aside to

support heat networks, which have been dubbed 'central heating for cities' and have the potential to reduce heating costs in some cases by more than 30%.

The networks remove the need for individual properties to have their own boilers by linking them to a single heat source.

Climate Change and Industry Minister Nick Hurd said:

This Government is committed to ensuring a clean, secure and affordable energy supply for communities and businesses across the country.

Energy innovations like heat networks can cut costs for households and reduce carbon emissions, as almost half of the energy we use goes towards heating our homes and buildings.

The £24 million in Government funding awarded to these projects will help deliver low carbon energy at competitive prices for local consumers.

Nine of the winning authorities will receive a share of just over £24 million of capital funding to support the building of their projects, with around £200K in early stage funding for a further four authorities to develop their plans. This will build a pipeline of high quality projects ready to compete for future rounds of capital funding.

Winning entries at the building stage include four projects in London, two in Manchester and one each in Sheffield, Crawley and Colchester. Support was won at the planning stage by projects in Trafford, Islington, Buckinghamshire and Middlesbrough.

Heat networks use technologies such as biomass boilers, heat pumps, energy from waste, combined heat and power (CHP) plants and even heat from deep below the earth's crust. They can also use recycled waste heat from places like factories, power stations and even the London Underground and pump it into homes and businesses to keep them warm.

The scheme will run over five years and is expected to enable up to 200 heat networks to be built, while leveraging around £2 billion of wider public and private investment.

Heat networks have already been used successfully in the UK, and are popular across Scandinavian cities for keeping homes warm in winter. The winners of this pilot will now begin to build their projects, with further funding available over the next four years to support hundreds more. The department aims to launch the main funding scheme by the end of 2017.

Notes to Editors

1. This initial funding was open to local authorities in England and Wales and public sector bodies who submitted applications last November. The total value of the fund over five years is £320m and in future years this will be opened up to a wider set of applicants. More information about applying for the scheme.
2. The estimated 30% reduction in heating costs is sourced from AECOM (2015) Assessment of the Costs, Performance, and Characteristics of UK Heat Networks. It compares estimated heat price for a small flat (10.24p/kWh) with average heat price from heat networks studied (6.43p/kWh) – pp. 35-36.
3. The nine winning projects will receive a share of just over £24 million, and will build networks using a variety of technologies:
 - Sheffield District Energy Network development- Energy from waste plant
 - Somers Town (Phase 2), Camden- Gas Combined Heat and Power (CHP) plant
 - Manchester Civic Quarter Heat Network- Gas Combined Heat and Power (CHP) plant
 - Colchester Northern Gateway- Heat pump
 - Wood Street South, Waltham Forest, London- Gas Combined Heat and Power (CHP) plant
 - Becontree, Barking & Dagenham- Gas Combined Heat and Power (CHP) plant
 - Church Street District Heating Scheme, Westminster- Gas Combined Heat and Power (CHP) plant
 - Crawley Town Centre Heat Network- Biomass boiler and Gas Combined Heat and Power (CHP) plant
 - St Johns Heat Network, Manchester- Gas Combined Heat and Power (CHP) plant
4. An energy from waste plant burns refuse such as household and garden waste to generate electricity and/or heat.
5. Combined Heat and Power (CHP) plants produce both heat and power simultaneously, often using reciprocating engines and water jackets to collect the heat. Combining generation of heat and power in this way can reduce carbon emissions by up to 30%.
6. A heat pump takes heat from the environment (e.g. air, ground, water but in this case heat from ground water), boosts it with a pump and it is then circulated to buildings on the network.
7. A biomass boiler burns sustainable wood product e.g. pellets or chips to create heat.

[Press release: Opening of humanitarian corridor from Sudan to South Sudan](#)

The members of the Troika (Norway, the United Kingdom, and the United States) welcome the Government of Sudan's opening of the border crossing into Bentiu, in South Sudan, for the delivery of humanitarian food assistance to areas gravely affected by the conflict and suffering from famine and severe food insecurity. This border crossing will allow for a second access route for emergency food assistance, along with the already open Kosti – Renk river corridor. The Troika also recognizes the Government of Sudan's efforts to facilitate the flow of food assistance through Port Sudan.

The Troika notes Sudan has accepted over 365,000 South Sudanese refugees, including more than 60,000 South Sudanese who have entered Sudan in the first three months of 2017, and encourages the government to ensure continued humanitarian access to these refugee communities. The Troika also welcomes the Sudanese government's decision to donate food from their own food reserves to people in need in South Sudan.

The Troika calls on the Government of South Sudan to coordinate with the World Food Program and partners providing vital assistance. The Troika urges the government and all armed groups to allow full and safe humanitarian access to reach communities in need, and to ensure that food and other commodities are not diverted from the intended beneficiaries.

The Troika recommends the opening of additional land and water routes between Sudan and South Sudan so that communities in both countries can benefit from open trade and the efficient and swift movement of humanitarian goods and personnel.

Further information

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[Press release: £250,000 of UK Government funding for the](#)

International Fund for Ireland

Secretary of State for Northern Ireland, Rt Hon James Brokenshire MP, has today announced an additional £250,000 of UK Government funding to tackle the underlying causes of sectarianism and violence and to build a stronger society.

The financial package is a further contribution by the UK Government to support the work of the International Fund for Ireland. The new money builds on the financial package put in place under the Fresh Start agreement which allocated £500 million to assist the Executive in tackling issues unique to Northern Ireland, including support for their programme to remove peace walls.

Announcing the additional funding, the Rt Hon James Brokenshire MP said:

By working towards the removal of peace walls, preparing young people from all walks of life to become economically and socially engaged and promoting shared education, the International Fund for Ireland makes a vital contribution to overcoming division within Northern Ireland society. They are helping to create a genuinely shared future for people in Northern Ireland.

This extra money from the UK Government will support this important work.

Under the Fresh Start Agreement in November 2015, the UK Government undertook to provide £60 million over 5 years in support of the Executive's delivery of confidence and relationship building measures between communities which would provide the conditions to allow for the removal of peace wall and the creation of a shared future.

Welcoming the announcement by the Secretary of State, IFI Chairman, Dr Adrian Johnston commented:

We are grateful for the generous support and encouragement from the UK Government. Along with the Irish Government, they have enabled the Fund to support many communities that have become marginalised and divided as a result of the conflict. The value of the Fund's international support and the independence it fosters has never been greater nor has our willingness to take measured risks for a lasting peace. The achievements of our approach are significant and set us apart from other funders.

News story: Home Secretary visits Birmingham to see anti-radicalisation work

The event included a meeting with Kikit, a West Midlands-based group that works with mosques and communities to provide mentoring and support for individuals who are vulnerable to terrorist recruiters.

The Home Secretary also attended a workshop run by Families Against Stress and Trauma (FAST) who encourage and empower family members to intervene where they fear their loved ones may be at risk of becoming radicalised or committing acts of terrorism.

The Home Secretary said:

After the horrific Westminster attack last month, groups and communities across the country came together and continued to challenge the threat of terrorism.

I came to Birmingham today to meet with some of the individuals who are at the forefront of this vital work, and see how they responded in light of the recent attack.

I am impressed and grateful for the determination of groups such as Kikit and FAST to work together within their communities to make sure those who prey on the vulnerable will not succeed.

British Muslim communities are delivering inspiring work to tackle extremism. This is a job for all of us and we stand together in rejecting all forms of extremism including Islamist and extreme right wing, to ensure terror attacks are not exploited by those who would seek to divide our society.