# UK's driest spring in 69 years pushes freshwater ecosystems to breaking point



The recent unseasonably warm weather across the UK has exacerbated ongoing concerns regarding the health of the nation’s freshwater ecosystems. The Environment Agency has indicated that Britain has experienced the driest start to spring in 69 years, which, coupled with widespread rising temperatures, is taking a severe toll on both agricultural practices and local wildlife. Farmers are grappling with parched fields, while aquatic life in moors and country parks faces critical water shortages. Environmental advocates are sounding alarms about the rising danger to freshwater fish species such as trout and salmon, which are showing signs of distress due to elevated water temperatures.

According to research conducted by the West Cumbria Rivers Trust, temperatures in various waterways have approached or reached 18°C, the threshold at which cold-water fish begin to suffer from heat stress. Notably, the River Greta in Keswick recorded temperatures of 17°C, while another local tributary, St John's Beck, reached the concerning 18°C mark. With many rivers experiencing abnormally low water levels—new images revealing riverbeds almost entirely dry—the trust’s assistant director, Luke Bryant, has expressed his concern over the situation, labelling it a "critical point" ahead of the anticipated hot summer months.

Bryant remarked on the urgent need for mitigation strategies, including increased tree planting along riverbanks to provide shade and help moderate water temperatures. While the forecasted rainfall may offer temporary relief, Bryant warned that further hot and dry conditions in June or July could culminate in even harsher challenges for the ecosystem and local fishing communities. He highlighted the extraordinary nature of the current weather pattern, which deviates markedly from historical norms.

The concerning trends in freshwater health are underscored by broader issues affecting England’s salmon population, which has plummeted to record lows, with approximately 90% of principal salmon rivers classified as 'at risk' or 'probably at risk'. The Environment Agency attributes this alarming decline not only to climate change but also to extensive pollution from agricultural runoff, wastewater, and other contaminants. Last year, the provisional rod catch yielded only 4,911 salmon—a troubling decline, as the lowest number recorded since tracking began in 1988.

Moreover, as the warmer weather persists, additional measures are being taken to save affected fish populations. Environmental teams are now on standby to oxygenate rivers, a process necessary to prevent deaths caused by dangerously low oxygen levels in the water. This response comes amid reports from the Angling Trust of a spike in fish mortality, particularly in regions like North West England, where environmental conditions have deteriorated.

Evidence from various studies reveals that rising water temperatures, combined with increased nutrient levels from pollution, are gravely threatening the ecosystems within rivers and lakes. Research led by the University of Sheffield highlights these changes are disrupting food webs, leading to more simplified ecological structures that degrade the overall health and functionality of these environments.

Furthermore, conservation groups have warned of a 'catastrophic' decline in freshwater fish, with nearly a third of species facing extinction. The wide-ranging causes of this crisis include pollution from sewage and industrial sources, unsustainable fishing practices, and habitat destruction. Alarmingly, populations of migratory fish have decreased by three-quarters over the past half-century, while larger species known as 'megafish' have reduced by an alarming 94%.

Given this critical situation, the Freshwater Habitats Trust has proposed that addressing river pollution alone is insufficient to rectify the freshwater crisis. They advocate for a comprehensive approach to freshwater conservation that emphasises protecting small, biodiverse habitats, such as headwater streams and ponds. This holistic perspective aims not only to tackle immediate issues but also to promote long-term resilience against both climate change and pollution, which are increasingly interlinked in their detrimental impacts on aquatic life.

As Britain grapples with these compounding challenges, the recovery and protection of its vital freshwater ecosystems will require a concerted effort from local communities, government bodies, and environmental organisations. The survival of key species, and indeed the broader health of the environment, hangs in the balance as summer approaches and temperatures continue to rise.

## Reference Map:

* Paragraph 1 – [[1]](https://www.express.co.uk/news/uk/2059294/uk-rivers-crisis-campaigners-issue), [[2]](https://www.reuters.com/business/environment/englands-salmon-population-sinks-new-low-due-poor-water-quality-2024-10-07/)
* Paragraph 2 – [[1]](https://www.express.co.uk/news/uk/2059294/uk-rivers-crisis-campaigners-issue), [[2]](https://www.reuters.com/business/environment/englands-salmon-population-sinks-new-low-due-poor-water-quality-2024-10-07/), [[5]](https://www.bbc.co.uk/news/science-environment-56160756)
* Paragraph 3 – [[3]](https://news.sky.com/story/teams-on-stand-by-to-pump-englands-rivers-with-oxygen-amid-fears-of-fish-deaths-due-to-hot-weather-12911577), [[4]](https://www.sheffield.ac.uk/news/warming-water-temperatures-and-increased-nutrient-levels-are-putting-freshwater-ecosystems-serious)
* Paragraph 4 – [[5]](https://www.bbc.co.uk/news/science-environment-56160756), [[6]](https://www.theguardian.com/environment/article/2024/aug/30/aquatic-life-under-threat-as-pollution-and-warmer-waters-wreak-havoc)
* Paragraph 5 – [[7]](https://freshwaterhabitats.org.uk/news/fixing-river-sewage-wont-solve-freshwater-crisis-says-uk-charity/)

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## Bibliography

1. <https://www.express.co.uk/news/uk/2059294/uk-rivers-crisis-campaigners-issue> - Please view link - unable to able to access data
2. <https://www.reuters.com/business/environment/englands-salmon-population-sinks-new-low-due-poor-water-quality-2024-10-07/> - England's Atlantic salmon population has reached a record low, with approximately 90% of principal salmon rivers classified as 'at risk' or 'probably at risk.' The Environment Agency attributes this decline to agricultural pollution, sedimentation, industrial chemical runoff, wastewater, and road pollutants. The situation has intensified public outcry against privatized water companies accused of routinely discharging raw sewage into waterways without adequate infrastructure investments. The provisional rod catch last year was 4,911 fish, marking the lowest record since tracking began in 1988.
3. <https://news.sky.com/story/teams-on-stand-by-to-pump-englands-rivers-with-oxygen-amid-fears-of-fish-deaths-due-to-hot-weather-12911577> - Environmental teams in England are on standby to oxygenate rivers to protect fish during heatwaves. The Environment Agency has recorded 'hundreds of fish kill incidents' this year, attributing the deaths to decreased oxygen levels in rivers and canals. The Angling Trust reports a 'spike' in fish deaths, particularly in the North West of England. This follows a hot spell in June, expected by the Met Office to be the warmest on record.
4. <https://www.sheffield.ac.uk/news/warming-water-temperatures-and-increased-nutrient-levels-are-putting-freshwater-ecosystems-serious> - An international study led by the University of Sheffield reveals that rising water temperatures and increased nutrient levels are significantly threatening freshwater ecosystems. The research indicates that these factors are causing food webs in lakes and streams to become less complex, leading to shorter food chains and degraded ecosystem functioning. The study emphasizes the urgent need to reduce river pollution levels to protect aquatic life.
5. <https://www.bbc.co.uk/news/science-environment-56160756> - A report warns of a 'catastrophic' decline in freshwater fish, with nearly a third threatened by extinction. Conservation groups report that 80 species have gone extinct, 16 in the last year alone. Factors contributing to this decline include pollution, unsustainable fishing, and the damming and draining of rivers and wetlands. Populations of migratory fish have fallen by three-quarters in the last 50 years, and larger species, known as 'megafish,' have decreased by 94%.
6. <https://www.theguardian.com/environment/article/2024/aug/30/aquatic-life-under-threat-as-pollution-and-warmer-waters-wreak-havoc> - Research indicates that a combination of climate change and pollution is severely threatening aquatic life. The study highlights that the interaction between warmer waters and pollution accelerates the destruction of aquatic ecosystems, particularly affecting the diversity of small creatures that fish rely on for food. In Britain, privatized water companies and industrial farming have been increasingly discharging raw sewage, animal waste, and fertilizers into waterways, exacerbating the problem.
7. <https://freshwaterhabitats.org.uk/news/fixing-river-sewage-wont-solve-freshwater-crisis-says-uk-charity/> - The Freshwater Habitats Trust argues that addressing river sewage in isolation is insufficient to solve Britain's freshwater crisis. The charity calls for an 'urgent policy reset' that protects the entire freshwater environment, emphasizing the need to focus on abundant and biodiverse small freshwater habitats, including headwater streams, ponds, and small fens. This approach aims to provide quick and cost-effective results while efforts are made to address the sewage issue.