

Scientists challenge claim British rivers are 'cleanest since Industrial Revolution'

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Water quality is still "unacceptably poor" in many British rivers, research involving academics at York has shown.

The study, published in *Science of The Total Environment*, challenges

recent claims from UK government that [water quality](#) in British Rivers is "better than at any time since the end of the Industrial Revolution."

Although progress has been made in reducing some pollutants—particularly in rivers downstream from major towns and cities—over the past three decades, the results of the study show a mixed picture, and do not support these claims.

Pharmaceuticals

Data analyzed in the study indicates that many rivers remain highly polluted, often from combined sewer overflows in addition to many new pollutants, such as pharmaceuticals and [personal care products](#), which are not routinely monitored and are likely to be on the rise.

In areas with [intensive agriculture](#) the water quality of rivers today is more affected by agrochemicals such as pesticides and nitrogen fertilizers than it was before the 1960s.

Impacts

Professor Alistair Boxall from the Department of Environment and Geography at the University of York said, "It is often claimed that the quality of UK rivers is better than ever. For some traditional pollutants such as sewage, nutrients and metals, this is probably true. However, as a society we now use more chemicals than ever before and many of these will end up in our rivers. The impacts of these chemicals are more subtle and will occur over a prolonged period of time but could be playing an important role in the loss of biodiversity in our rivers."

As part of their analysis, the scientists collated available, often very limited, data for seven different categories of water pollutants from the

late 19th Century up to the present day, combined with insights into historical population growth, [industrial activity](#) and wastewater treatment provision.

'Unacceptably poor'

The researchers noted that, while levels of some pollutants probably peaked at some point between the 1960s and the mid-1990s and have since declined, water quality is still "unacceptably poor" in multiple areas across the UK, and there are signs that recent progress to tackle pollution has stalled. Levels of nitrate in many catchments remain high, and levels of most synthetic organic pollutants are unknown.

The authors of the study have called for urgent improvements to water quality in many rivers and streams, as well as enhancements to monitoring programs, including increased frequency and geographical spread of sampling and including a wider range of pollutants in routine analyses.

Contaminants

Lead-author of the study, Professor Mick Whelan from the University of Leicester, said that "data for many pollutants show that concentrations are, indeed, likely to be lower than they were in the 1960s and '70s. Legislation such as the European Urban Wastewater Treatment Directive have clearly played a very important role in cleaning up our rivers from the mid-1990s. However, we have very little understanding about the impacts of many contaminants because we just don't look for them routinely."

More information: M.J. Whelan et al, Is water quality in British rivers "better than at any time since the end of the Industrial Revolution"?,

Science of The Total Environment (2022). [DOI: 10.1016/j.scitotenv.2022.157014](https://doi.org/10.1016/j.scitotenv.2022.157014)

Provided by University of York

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