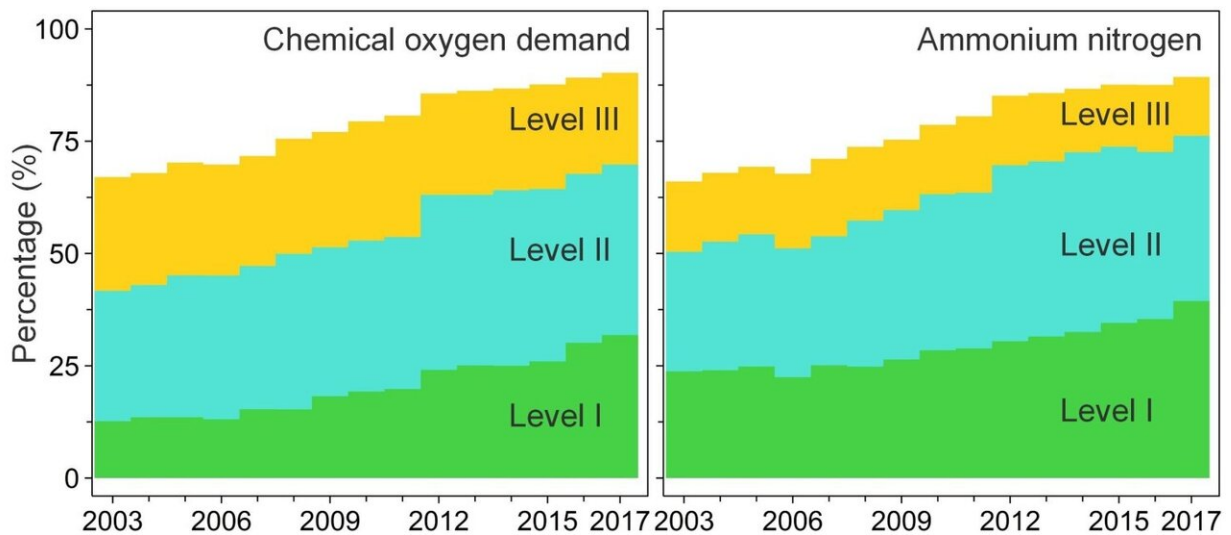


China's inland surface water quality significantly improves

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Increases in the percentage of China's inland surface water bodies at quality levels I, II and III (generally signifying protected potable water sources) from 2003-2017, based on two key water quality parameters. Credit: Prof. MA Ting's group

A new study shows that China's inland surface water quality improved significantly from 2003-2017, coinciding with major efforts beginning in 2001 to reduce water pollution in the country.

The research was conducted by a team led by Profs. Ma Ting and Zhou Chenghu from the Institute of Geographic Sciences and Natural

Resources Research of the Chinese Academy of Sciences. Their findings were published in *Science Advances*.

The researchers analyzed the nationwide variability of inland surface [water quality](#) across China during this 15-year period and the response to anthropogenic pollution. They found that annual mean concentrations of two important [water](#) quality parameters—chemical oxygen demand and ammonium nitrogen—declined at the national level by 63 percent and 78 percent, respectively, during the period.

At the regional level, northern river basins showed relatively fast rates of decline in both of these parameters, while water quality in most southern river basins maintained favorable levels.

Improved inland surface water quality across the country is mainly attributable to reduced pollution emissions in the industrial, rural, and urban residential sectors.

A cross-regional comparison conducted as part of this investigation showed conspicuous interregional variations in water pollution. In general, [northern regions](#) showed relatively [poor water quality](#) due to intense human pressure on local environments. In contrast, most southern river basins showed better water quality due to relatively low levels of human disturbance.

The study confirms the effectiveness of massive environmental protection efforts aimed at controlling [pollution](#) discharge and improving water quality in China over the past nearly two decades, notwithstanding growing pressure from human activity.

The researchers believe China's inland surface waters will achieve good ecological status in the near future if current trends hold.

They also suggested that water quality dynamics and the forces propelling such dynamics should determine strategies used to control [water pollution](#), while taking regional variations into account.

More information: "China's improving inland surface water quality since 2003," *Science Advances* (2020). [DOI: 10.1126/sciadv.aau3798](https://doi.org/10.1126/sciadv.aau3798) , advances.sciencemag.org/content/6/1/eaau3798

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