

The Amur River Basin lost 22% of its wetlands from 1980 to 2016

November 23 2020, by Li Yuan



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The United Nations Sustainable Development Goals (SDGs) highlight the conservation and restoration of wetlands. Understanding the extent of wetlands, their change trends and the proximate causes is important

for the conservation of wetlands and endangered waterfowls.

A study from Northeast Institute of Geography and Agroecology (IGA) of the Chinese Academy of Sciences focusing on the wetland changes and proximate causes in the world's ninth-largest river basin, Amur River Basin (ARB) found that the ARB has lost 22% of its wetlands from 1980 to 2016.

The study was published online in *Journal of Environmental Management* on Nov. 17.

"There is a consensus that the striking loss and degradation of wetlands in the ARB induced soil organic carbon and biodiversity declines. Nevertheless, there is an information deficiency in regard to its spatially explicit wetland extent and changes. We still do not know what caused the wetland changes in various periods in the ARB," said Dr. Mao Dehua, the first author of the paper.

The results revealed that the ARB lost 22% of its wetland (52,246 km²) from 1980 to 2016, with a consistent net loss from 1980 to 2010 and an area gain from 2010 to 2016. It held 184,561 km² of wetlands in 2016, accounting for 9% of the whole basin area.

Human activities dominated the consistent wetland losses on the Chinese side of the ARB, of which cropland expansion was the primary proximate cause, accounting for 69%. Conversely, the [wetlands](#) on the Russian side had consistent losses from 1980 to 2010 followed by a gain from 2010 to 2016, which could be attributed to climate change.

"The quantified data in the study will inform decision-making on wetland conservation and benefit scientific studies depending on spatially explicit wetland information. Both China and Russia face a challenge in balancing economic development and wetland [conservation](#).

Especially on the China side of the ARB, policy and protective effectiveness improvement are required for future wetland management," said Prof. Wang Zongming, the corresponding author of the paper.

More information: Dehua Mao et al. Wetland changes in the Amur River Basin: Differing trends and proximate causes on the Chinese and Russian sides, *Journal of Environmental Management* (2020). [DOI: 10.1016/j.jenvman.2020.111670](https://doi.org/10.1016/j.jenvman.2020.111670)

Provided by Chinese Academy of Sciences

Citation: The Amur River Basin lost 22% of its wetlands from 1980 to 2016 (2020, November 23) retrieved 3 April 2024 from <https://phys.org/news/2020-11-amur-river-basin-lost-wetlands.html>

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