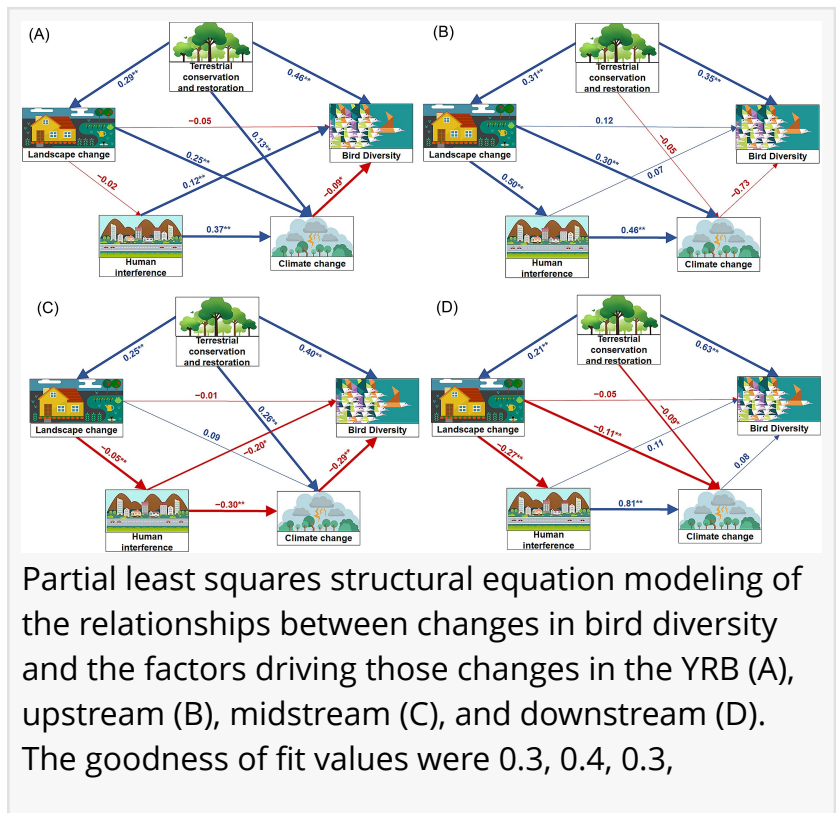


Feathered fortunes: bird diversity soars in China's Yangtze River Basin

GA, UNITED STATES, January 10, 2025 /EINPresswire.com/ -- A pivotal study reveals a significant rise in [bird diversity](#) across China's Yangtze River Basin (YRB) over the past decade, driven by large-scale ecological restoration efforts. While the overall diversity of avian species has increased, challenges persist in downstream regions, where wetland degradation has led to a decline in bird populations. These findings highlight the success of restoration programs but also emphasize the urgent need for more targeted conservation strategies, particularly in vulnerable wetland areas.



The Yangtze River Basin (YRB), a critical ecological zone and a global biodiversity hotspot, faces increasing pressures from habitat degradation, climate change, and human activity. These factors have led to a worrying decline in biodiversity, threatening the region's ecological balance and the essential services it provides. To address these challenges, understanding the drivers of bird diversity and the effectiveness of existing conservation measures is crucial. This study aims to fill that knowledge gap by examining long-term trends in bird populations within this vital region.

In a study (DOI: 10.1016/j.eehl.2024.10.001) published in the Eco-Environment & Health journal on November 1, 2024, researchers from Nanjing Institute of Environmental Sciences which is affiliated to the Ministry of Ecology and Environment of China, in collaboration with Princeton University, present a comprehensive analysis of bird diversity across 536 sites in the YRB from 2011 to 2020. The study employs a newly optimized Living Planet Index (LPIO), a unique tool that combines species abundance, richness, and information entropy to track changes in bird populations over time.

Using the LPIO, the researchers observed a 6.12% increase in bird diversity across the YRB from 2010 to 2020, marking a notable reversal from the global trend of biodiversity loss. This rise was most pronounced in terrestrial bird diversity, with substantial improvements in functional complexity throughout the watershed. However, the downstream region of the basin saw a 2.83% decrease in bird diversity, mainly due to the alarming decline in wetland bird species. The study underscores the role of large-scale ecological restoration programs in reversing biodiversity loss, but it also points to the critical need for more focused conservation efforts, especially in the wetland areas where degradation has been most severe.

“Our study provides compelling evidence that targeted conservation efforts can halt the decline of biodiversity,” says lead author Wei Liu. “The findings underscore the importance of continued monitoring and more effective wetland restoration strategies to ensure the long-term protection of avian biodiversity in the YRB.”

Looking ahead, the study’s outcomes advocate for a renewed focus on wetland conservation, stressing that strategic ecological restoration can yield significant benefits for biodiversity. The findings offer a model for other regions facing similar environmental challenges, illustrating how targeted conservation efforts can enhance biodiversity and protect the ecosystem services vital for human well-being and economic stability. By prioritizing habitat recovery—particularly in wetlands—there is a promising opportunity to restore balance in the YRB and beyond.

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