



Wildlife returns to one of US' most famous rivers

The splash was so loud that environmental advocate Mr. Lewis Pugh, the British-South African, who is a United Nations Environment Programme (UNEP) Patron of the Ocean, thought someone had jumped off the bridge that he was swimming under. But then Mr. Lewis Pugh, in the midst of a month-long swim down the United States' Hudson River, saw what had joined him in the water: a bald eagle. "This majestic creature spread its wings and lifted up right in front of us. I will never forget the sight of it", says Mr. Lewis Pugh.

Mr. Lewis Pugh, has completed a 507km swim down the Hudson. The journey cast a spotlight on the River's resurgence - and the need to protect the world's waterways from pollution, climate change and a range of other threats.

The appearance of a bald eagle on the Hudson would have seemed nearly impossible a few decades ago. America's national bird, they were on the verge of extinction in the Northeastern United States, decimated by the widespread use of the pesticide DDT. But since a ban on the pesticide in 1972, the bald eagles have returned.

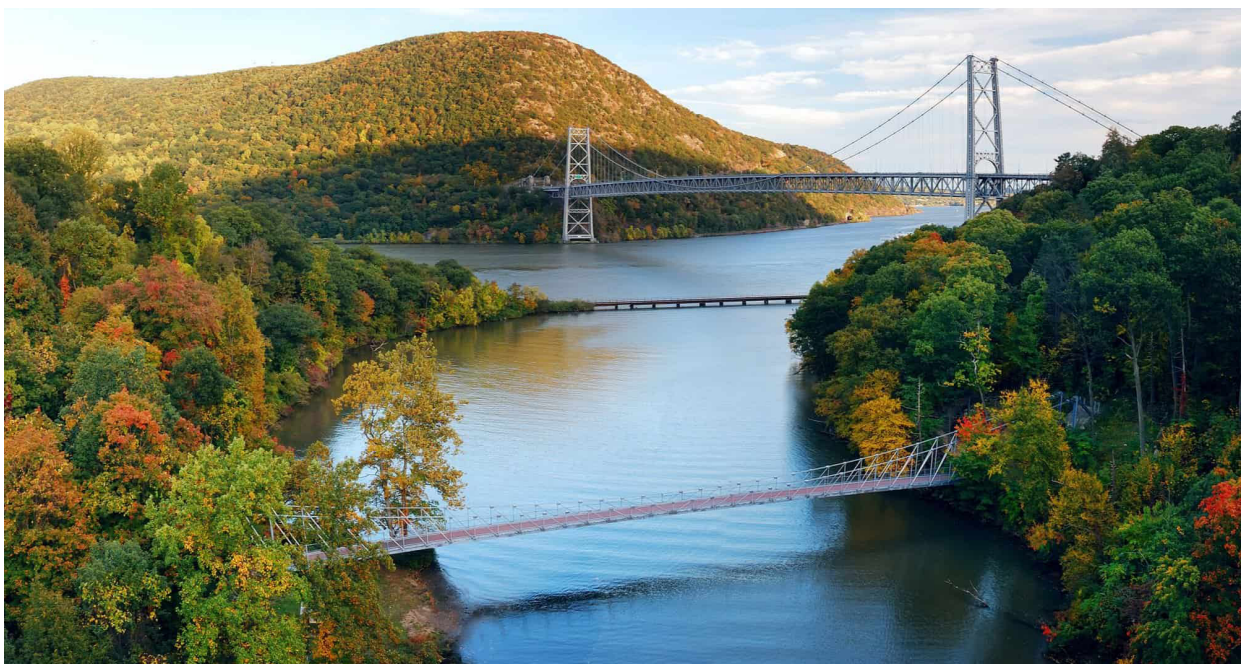
"This year, the locals say they have seen record numbers of these birds. What a wonderful success story", says Mr. Lewis Pugh. During his swim, he also saw turkey vultures, beavers, ospreys, snakes a black bear and some snapping turtles, which can reach 30kg. "They are terrifying. I would rather face a great white shark than a snapping turtle", Mr. Lewis Pugh jests.

The return of wildlife to the Hudson, once one of the country's most-polluted rivers, is seen in many quarters as a conservation success story. It comes after a decades-long effort to clean up the waterway and for many, it is a promising sign for the future.

"Rivers are the lifeblood of human civilization, but in too many places they - and the animals and plants that call them home - are in peril", said Mrs. Leticia Carvalho, the Head of the Marine and Freshwater Branch at UNEP. "The improvement in the health of the Hudson River shows us that it is possible to revive inland waterways - and make them teem with life once again. What is good for the health of our water bodies is also good for human health!"

Back from the brink

Just 150 years ago, the Hudson River was one of the most productive ecosystems in the world. Schools of migratory shad, sturgeon, river herring, blue crab, menhaden and striped bass used the River as an unimpeded corridor from the Atlantic to their spawning grounds. That abundance supported a range of other species and a thriving fishing industry.



▲ *The Hudson River in New York City, US*



In the 20th Century, population growth and industrialization led to pollution, damming, excessive logging and habitat fragmentation, hammering fish stocks. Efforts over the past 50 years to clean up the River and its many tributaries, however, have begun to bear fruit.

In 1972, the United States passed the Clean Water Act, which stopped companies from routinely dumping toxins into the River. Bans on commercial fishing were introduced in 1976 and extended in 1985. Today only two of the 228 fish species in the river are caught commercially - the blue crab and river herring. In 2002, officials began dredging silt laden with polychlorinated biphenyls, better known as PCBs, which had contaminated a 320km stretch of the River.

New York State passed a law that established the Hudson River Park Trust to operate and maintain a new public park and estuarine sanctuary along the Manhattan shoreline, one of many efforts to rewild the Hudson's banks.

Apart from Government initiatives, citizen scientists, schools and campaign groups, like Riverkeeper, are tracking aquatic species to help inform policy decisions. Challenges remain, though. Old dams in some tributaries are still preventing fish from reaching their spawning grounds. As well, riverine planning is uncoordinated, as over 80 percent of the watershed is privately owned, according to Cornell University.

Climate change is another challenge. Warmer ocean temperatures, causing sea-level rise, as well as more intense heatwaves, flooding and droughts, are affecting the River's ecology. In an assessment in 2011, 70 of 119 wildlife species in New York state were found to be vulnerable to climate change, with mollusks and amphibians near the top of the list, according to the New York Natural Heritage Program. Invasive species are an additional challenge.

A global problem

Freshwater ecosystems are particularly biodiverse, supporting about 10 percent of all described species. Some 55 percent of fish species depend on freshwater for their survival. These species are going extinct more rapidly than terrestrial or marine species, with around one-third of all freshwater biodiversity facing extinction due to invasive species, pollution, habitat loss and over-harvesting. In 2018, the World Wildlife Fund estimated that populations of animals living in fresh water experienced a far more drastic decline than elsewhere on the planet - 83 percent between 1970 and 2014.

Pollution is a major driver of aquatic wildlife decline. Globally, water pollution has continued to worsen over the last two decades, increasing the threats to freshwater ecosystems and human health, says UNEP's 2021 flagship report, *Making Peace With Nature*.

Another important driver of riverine wildlife decline is infrastructure development that breaks up the connectivity of freshwater ecosystems. "The diversity of wildlife in and around a river is an indicator of its resilience and health as an ecosystem", says Mrs. Leticia Carvalho. "We must redouble our efforts to monitor river biodiversity, prevent pollutants from entering rivers and the ocean, allow nature to return and in the longer term create more circular economies".

On the rebound

There are signs internationally of a willingness to turn around the fates of some rivers. In 2022, the UN Environment Assembly, the world's highest decision-making body on the environment, passed a resolution calling for the protection of lakes and connected ecosystems, like rivers.

In March 2023, a collection of six developing nations launched the Freshwater Challenge, the largest ever initiative to restore degraded rivers, lakes and wetlands. It is expected to be a cornerstone of efforts to safeguard freshwater ecosystems at the upcoming UN Climate Change Conference in Dubai.

Across the world, efforts are being made to clean up and restore rivers, such as the Thames and Ganga. Officials are even aiming to clean up what is said to be the most polluted river in the world, Rio Motagua in Guatemala. France is ambitiously aiming to make the Seine swimmable in time for the 2024 Summer Olympics.

In the Netherlands, a 30-year project to restore a 45km stretch of the River Meuse has reduced flood risk, made nature more diverse, and boosted the local economy through tourism. In February 2023, the Government of Kenya set up the Nairobi Rivers Commission to coordinate the rehabilitation, protection and restoration of the heavily polluted Nairobi River.

The Kunming-Montreal Global Biodiversity Framework, a landmark pact to protect and restore nature adopted in December 2022, seeks to, among other things, ensure that by 2030 at least 30 percent of areas of degraded inland water are under effective restoration. This is seen as crucial to enhancing biodiversity and reviving the interconnectedness of ecosystems ■

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(Source: UNEP.org)