

Collapsing wildlife populations near ‘points of no return’, report warns

As average population falls reach 95% in some regions, experts call for urgent action but insist ‘nature can recover’

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An orangutan in Sabah, where much of the forest has been cleared for palm oil. A study found 3,000 orangutans a year were being killed on Borneo’s palm oil plantations. Photograph: Alamy

Global wildlife populations have plunged by an average of 73% in 50 years, a new scientific assessment has found, as humans continue to push ecosystems to the brink of collapse.

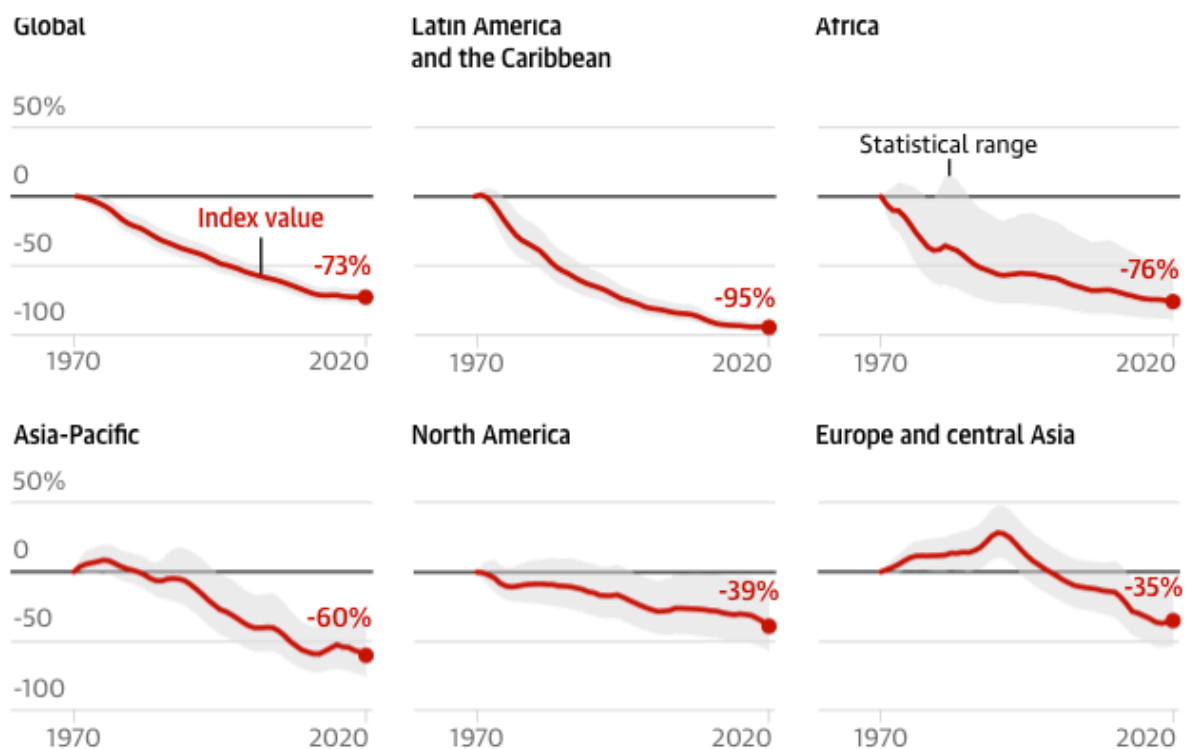
Latin America and the Caribbean recorded the steepest average declines in recorded wildlife populations, with a 95% fall, according to the WWF and the Zoological Society of London’s (ZSL) biennial Living Planet report. They were followed by Africa with 76%, and Asia and the Pacific at 60%. Europe and North America recorded comparatively lower falls of 35% and 39% respectively since 1970.

Scientists said this was explained by much larger declines in wildlife populations in Europe and North America before 1970 that were now being replicated in other parts of the world. They warned that the loss could quicken in future years as global heating accelerates, triggered by tipping points in the Amazon rainforest, Arctic and marine ecosystems, which could have catastrophic consequences for nature and human society.

Matthew Gould, ZSL's chief executive, said the report's message was clear: "We are dangerously close to tipping points for nature loss and climate change. But we know nature can recover, given the opportunity, and that we still have the chance to act."

Between 1970 and 2020 Latin America and the Caribbean had the steepest decline in biodiversity

Living Planet Index, 1970 baseline



Guardian graphic. Source: World Wildlife Fund and Zoological Society London. Note: The Living Planet Index tracks data for 34,836 populations of 5,495 species of mammals, birds, reptiles and amphibians

The figures, known as the Living Planet Index, are made up of almost 35,000 population trends from 5,495 birds, fish, amphibians and reptiles species around the world, and have become one of the leading indicators of the global state of wildlife populations. In recent years, the metric has faced criticism for potentially overestimating wildlife declines.

The index is weighted in favour of data from Africa and Latin America, which have suffered larger declines but have far less reliable information about populations. This has had the effect of driving a dramatic top line of global collapse despite information from Europe and North America showing less dramatic falls.

Hannah Wauchope, an ecology lecturer at Edinburgh University, said: “The weighting of the Living Planet Index is imperfect, but until we have systematic sampling of biodiversity worldwide, some form of weighting will be necessary. What we do know is that as habitat destruction and other threats to biodiversity continue, there will continue to be declines.”

Critics question the mathematical soundness of the index’s approach, but acknowledge that other indicators also show major declines in the state of many wildlife populations around the world.



Brazilian rainforest in Humaitá. The report identifies land-use change driven by agriculture as the most important cause of the fall in wildlife populations. Photograph: Adriano Machado/Reuters

In a [critique of the index](#) published by Springer Nature in June, scientists said it “suffers from several mathematical and statistical issues, leading to a bias towards an apparent decrease even for balanced populations”.

They continued: “This does not mean that in reality there is no overall decrease in vertebrate populations [but the] current phase of the Anthropocene [epoch] is characterised by more complex changes than ... simple disappearance.”

The IUCN’s Red List, which has assessed the health of more than 160,000 plant and animal species, has found that almost a third are at risk of extinction. Of those assessed, 41% of amphibians, 26% of mammals and 34% of conifer trees are at risk of disappearing.

The index has been published days ahead of the Cop16 biodiversity summit in Cali, Colombia, where countries will meet for the first time since agreeing on a set of international targets to halt the freefall of life on Earth. Governments have never met a single biodiversity target in the history of UN agreements and scientists are urging world leaders to make sure this decade is different.

Susana Muhamad, Cop16 president and Colombia’s environment minister, said: “We must listen to science and take action to avoid collapse.

“Globally, we are reaching points of no return and irreversibly affecting the planet’s life-support systems. We are seeing the effects of deforestation and the transformation of natural ecosystems, intensive land use and climate change.

“The world is witnessing the mass bleaching of coral reefs, the loss of tropical forests, the collapse of polar ice caps and serious changes to the water cycle, the foundation of life on our planet,” she said.



How the ‘Frida Kahlo of environmental geopolitics’ is lighting a fire under big oil

Land-use change was the most important driver of the fall in wildlife populations as agricultural frontiers expanded, often at the expense of ecosystems such as tropical rainforests. Mike Barrett, director of science and conservation at WWF-UK, said countries such as the UK were driving the destruction by continuing to import food and livestock feed grown on previously wild ecosystems.

“The data that we’ve got shows that the loss was driven by a fragmentation of natural habitats. What we are seeing through the figures is an indicator of a more profound change that is going on in our natural ecosystems ... they are losing their resilience to external shocks and change. We are now superimposing climate change on these already degraded habitats,” said Barrett.

“I have been involved in writing these reports for 10 years and, in writing this one, it was difficult. I was shocked,” he said.