

Wildlife in decline: Earth's vertebrates fall 58% in past four decades

Living Planet Report predicts that by 2020, populations will have declined by two-thirds from 1970.

- [Nisha Gaiind](#)

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Wil Meinderts/Minden Pictures/FLPA

The European eel (*Anguilla anguilla*) is one of many freshwater species that is in decline because of habitat changes.

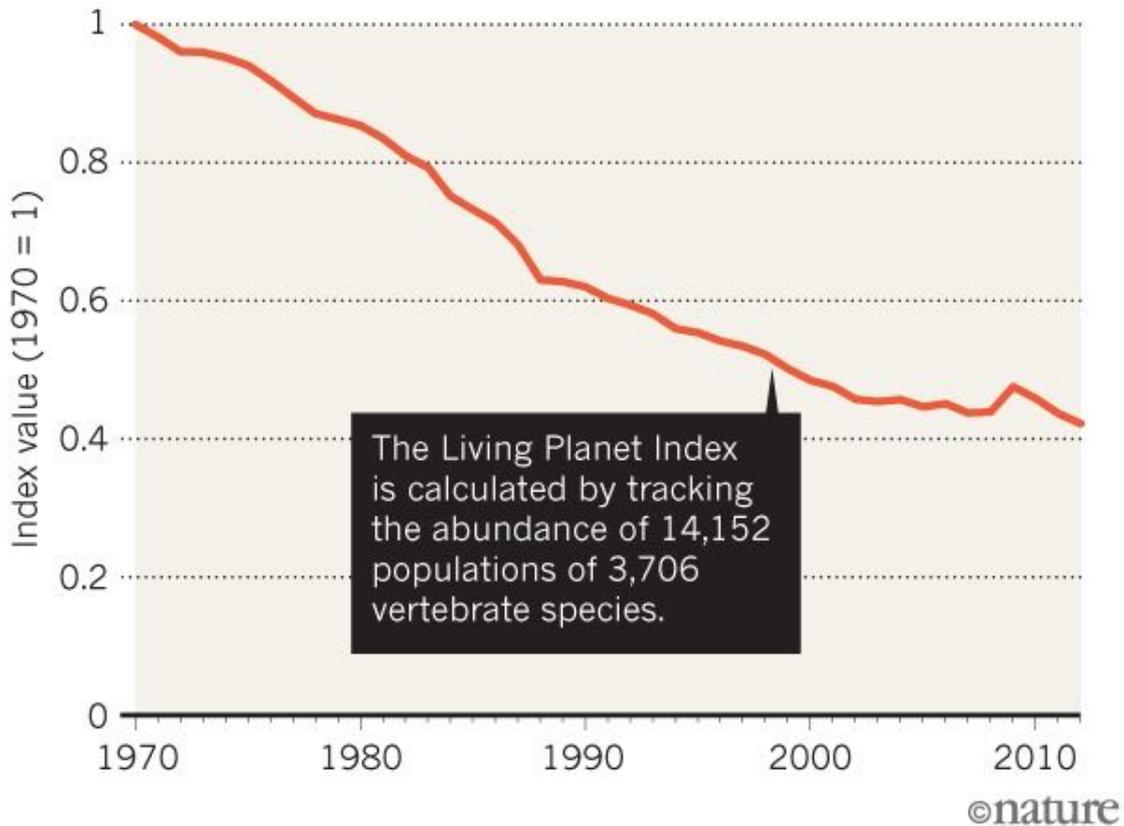
The populations of Earth's wild mammals, birds, amphibians, fish and other vertebrates declined by more than half between 1970 and 2012, according to a report from environmental charity WWF and the Zoological Society of London (ZSL).

Activities such as deforestation, poaching and human-induced climate change are in large part to blame for the decline. If the trend continues, then by 2020 the world will have lost two-thirds of its vertebrate biodiversity, according to the [Living Planet Report 2016](#). "There is no sign yet that this rate will decrease," the report says.

"Across land, freshwater and the oceans, human activities are forcing species populations and natural systems to the edge," says Marco Lambertini, director-general of WWF International.

VULNERABLE VERTEBRATES

Earth's vertebrate populations declined by 58% between 1970 and 2012, with human activities much to blame.



Source: Living Planet Report 2016

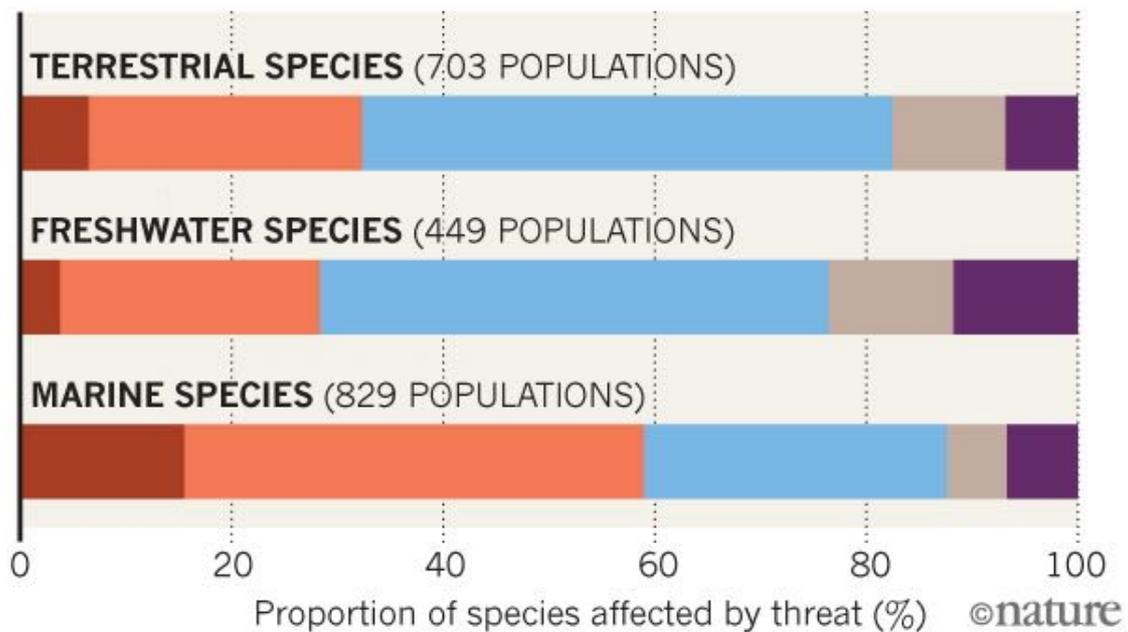
The main threat facing declining populations is habitat loss — caused by logging, agriculture and the disruption of fresh-water systems such as rivers. Fresh-water populations, which declined by 81%, are increasingly thought to be faring worse than those living in terrestrial regions.

“An average decline in population abundance exceeding 80% is, frankly, terrifying,” says Mike Hoffmann, senior scientist to the International Union for Conservation of Nature’s Species Survival Commission in Cambridge, UK. “This is arguably the most damning evidence yet of the damage we are wreaking on our freshwater environments.”

THREATS ABOUND

The Living Planet Report tracks vertebrate populations in three main ecosystems: terrestrial, freshwater and marine. Habitat loss and overexploitation are the main threats to declining populations.

■ Climate change ■ Overexploitation ■ Habitat loss or degradation
■ Invasive species and disease ■ Pollution



Source: Living Planet Report 2016

Data gaps

The analysis, which is published every two years, pulls together data from more than 3,000 sources that consistently track populations, including short-term and long-term monitoring projects. It tracks the status of 14,152 populations of some 3,700 vertebrate species. But it does not claim to be comprehensive: although several hundred species (many of them fish) have been added since the 2014 edition, the data set has “major geographic gaps”, the report acknowledges, with much of its data concentrated in western Europe.

Another bias of the study is that monitoring attention may be disproportionately focused on populations that are already declining, notes Hoffman. The overall pattern of decline will be hiding some population increases, he says. Still, Hoffmann says that the biases are likely to diminish as new monitoring schemes contribute data from under-sampled regions or species.

Rhys Green, a conservation scientist at the University of Cambridge, UK, agrees that the data may have a bias, but says that the methods and data are substantially improved from the 2014 report. “No data set or statistical procedure can yield a perfect result, but this is the best indicator we have, and it is valuable for policymaking,” he says.

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World wildlife 'falls by 58% in 40 years'

By Rebecca Morelle

Science Correspondent, BBC News

5 hours ago

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Science & Environment

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Image caption

This report estimates that wildlife populations have declined by nearly 60% since 1970

Global wildlife populations have fallen by 58% since 1970, a report says.

The Living Planet assessment, by the Zoological Society of London (ZSL) and WWF, suggests that if the trend continues that decline could reach two-thirds among vertebrates by 2020.

The figures suggest that animals living in lakes, rivers and wetlands are suffering the biggest losses.

Human activity, including habitat loss, wildlife trade, pollution and climate change, is attributed to the declines.

Dr Mike Barrett, head of science and policy at WWF, said: "It's pretty clear under 'business as usual' we will see continued declines in these wildlife populations. But I think now we've reached a point where there isn't really any excuse to let this carry on.

"We know what the causes are and we know the scale of the impact that humans are having on nature and on wildlife populations - it really is now down to us to act."

However the methodology of the report has been criticised.



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CARLOS DREWS / WWF

Image caption

The report looked at data collected on 3,700 species of vertebrates over the last 40 years

The Living Planet Report is published every two years and aims to provide an assessment of the state of the world's wildlife.

For freshwater species alone, the decline stands at 81% since 1970

Dr Mike Barrett, WWF

This analysis looked at data collected on 3,700 different species of birds, fish, mammals, amphibians and reptiles - about 6% of the total number of vertebrate species in the world.

The researchers then analysed how the population sizes had changed over time since 1970.

The last report, published in 2014, estimated that the world's wildlife populations had halved over the last 40 years.

This assessment suggests that the trend has continued: since 1970, populations have declined by an average of 58%.

Dr Barrett said some groups of animals had fared worse than others.

"We do see particularly strong declines in the freshwater environment - for freshwater species alone, the decline stands at 81% since 1970. This is related to the way water is used and taken out of fresh water systems, and also the fragmentation of freshwater systems through dam building, for example."



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WWF

Image caption

African elephants numbers have fallen dramatically as poaching has increased

It also highlighted other species, such as African elephants, which have suffered huge declines in recent years with the increase in poaching, and sharks, which are threatened by overfishing.

If pressures - overexploitation, illegal wildlife trade for example - increase or worsen, then that trend may be worse

Dr Robin Freeman, ZSL

The researchers conclude that vertebrate populations are declining by an average of 2% each year, and warn that if nothing is done, wildlife populations could fall by 67% (below 1970 levels) by the end of the decade.

Dr Robin Freeman, head of ZSL's Indicators & Assessments Unit, said: "But that's assuming things continue as we expect. If pressures - overexploitation, illegal wildlife trade, for example - increase or worsen, then that trend may be worse.

"But one of the things I think is most important about these stats, these trends are declines in the number of animals in wildlife populations - they are not extinctions. By and large they are not vanishing, and that presents us with an opportunity to do something about it."



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Image caption

There are still many gaps in our knowledge of the world's vertebrates

However, Living Planet reports have drawn some criticisms.

There are some numbers [in the report] that are sensible, but there are some numbers that are very very sketchy

Stuart Pimm, Duke University

Stuart Pimm, professor of conservation ecology at Duke University in the United States, said that while wildlife was in decline, there were too many gaps in the data to boil population loss down to a single figure.

"There are some numbers [in the report] that are sensible, but there are some numbers that are very, very sketchy," he told BBC News.

"For example, if you look at where the data comes from, not surprisingly, it is massively skewed towards western Europe.

"When you go elsewhere, not only do the data become far fewer, but in practice they become much, much sketchier... there is almost nothing from South America, from tropical Africa, there is not much from the tropics, period. Any time you are trying to mix stuff like that, it is is very very hard to know what the numbers mean.

"They're trying to pull this stuff in a blender and spew out a single number.... It's flawed."

But Dr Freeman said the team had taken the best data possible from around the world.

"It's completely true that in some regions and in some groups, like tropical amphibians for example, we do have a lack of data. But that's because there is a lack of data.

"We're confident that the method we are using is the best method to present an overall estimate of population decline.

"It's entirely possible that species that aren't being monitored as effectively may be doing much worse - but I'd be very surprised if they were doing much better than we observed. "