

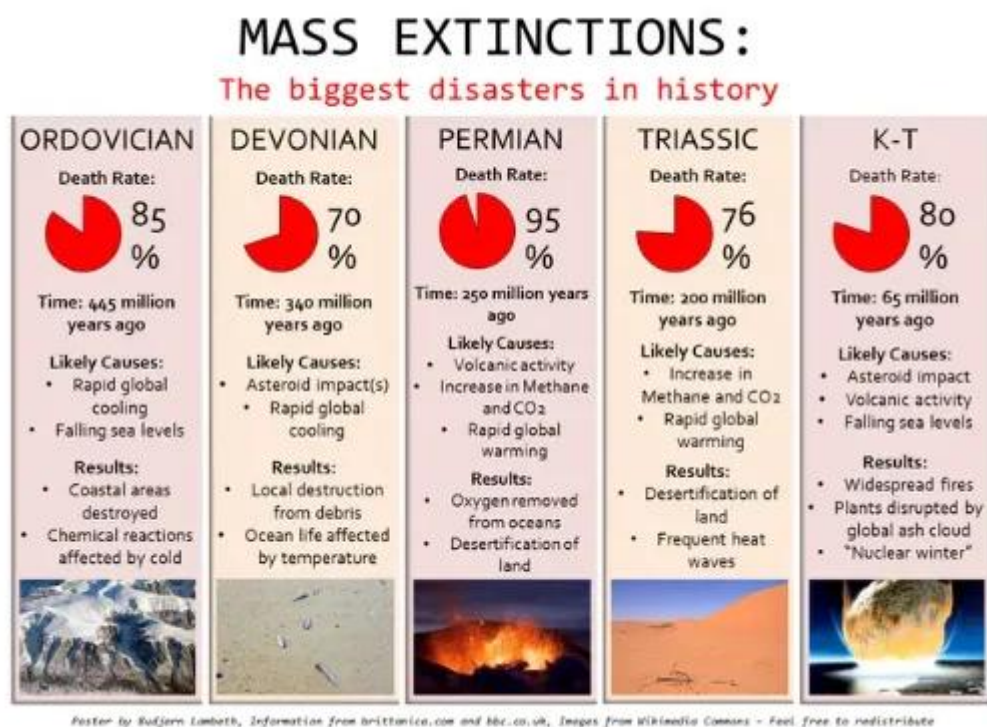
Measuring Biodiversity Loss: Are We Heading Toward a Sixth Mass Extinction?

Category: Environment, Science, Sustainability

written by Emily Larsen | April 10, 2026

Why Biodiversity Measurement Matters Now

Most people are familiar with the story of the dinosaurs: creatures that once dominated the Earth but were ultimately wiped out, most likely by a meteorite impact ([McDermott, 2026](#)). Evidence from fossils and other remnants of past biodiversity reveals that life on Earth was once dramatically different from what we see today. Over geological time, the composition of life on the planet has changed repeatedly. Scientists estimate that biodiversity has undergone several major shifts, including five major mass extinction events within the last 500 million years ([Ritchie, 2022](#)).



Mass extinction events. The extinction event that caused the extinction of the

dinosaurs is the K-T disaster.

Source: [Fiveable, 2025](#)

Evolution and climate have played major roles in this change ([Edelsparre et al., 2024](#)). Animals and plants have adapted to the environmental and climatic conditions of the planet over time, highlighting the complex and intricate factors that keep them intertwined. This is [Strong Sustainability](#), the THRIVE [Foundational Focus Factor](#) (FFF) concerned with ensuring the environment and biodiversity are both able to regenerate and be viable for future generations. The climate and environment play a major part in our lives, affecting when we eat, sleep, and socialise.

This is also true of the animal and plant worlds. They take their cues for breeding, feeding, and other functions from the world around them. Plants bloom at specific times of the year, and animals breed in spring and hibernate in winter ([IFAW, 2022](#)). They are also affected by changes to environmental conditions, having [reduced survivability](#) outside the conditions to which they are adapted.

How IS Biodiversity Currently Measured?

We need to measure biodiversity to ensure we understand the world around us. The systems that provide us with the essential requirements of life: clean air, food, and water ([WHO, 2025](#)). To interact with our natural world without causing harm and ensure ecosystem resilience. High biodiversity indicates a healthy environment, crucial for ensuring environmental regeneration for decades to come. Here, [Regenerative Economy](#), the THRIVE Project FFF for creating a circular economy, essential for preventing future declines of biodiversity and the natural environment.

Currently, there is no universal standard for measuring biodiversity, as biodiversity is a complex metric that changes from ecosystem to ecosystem ([Schneeberger, 2023](#)). In fact, over 40 approaches exist today, including:

- The [Kunming-Montreal Protocol](#)
- Species Threat and Restoration ([STAR](#)) metric
- Localised ecosystem reporting
- [Simpson's Diversity Index](#)
- The [Shannon-Wiener Index](#)

These approaches all work towards the same goal in a different way. However, organisations such as the [Taskforce on Nature-related Financial Disclosures \(TNFD\)](#), the [Science Based Targets Network \(SBTN\)](#), and the [Global Reporting Initiative \(GRI 101\)](#) are working towards standardising these metrics to create a universal reporting system for biodiversity.

In this way we can consistently and comparatively see areas of biodiversity loss and work towards conservation, preserve ecosystem functions and prevent species loss ([Strange et al., 2024](#)). Current metrics fail to capture the magnitude and complexity of biodiversity, particularly on a local scale, something that researchers and scientists agree is essential.

The current state of biodiversity

Biodiversity is at a critical point in history ([UN, 2025](#)). Species are becoming extinct at a far greater rate than at any point in recorded history, except during catastrophic planetary events (such as the meteorite that killed the dinosaurs) ([Ritchie, 2022](#)). In fact, scientists currently estimate that species are going extinct tens to thousands of times greater than the natural background rate. Meaning we are losing biodiversity tens to hundreds of times higher than natural background levels recorded in the past ([IUCN, 2025](#)).

How Will biodiversity Loss affect humans?

Humans are not as separate from nature as we like to think. Biodiversity loss will [affect humans](#) in many ways. These include:

- Alterations to the food web
- Income generation
- Loss of natural functions/ecosystem services
- Lowered immune system

A loss of one species can result in an abundance of another, or lead to the extinction of another, if that species relied on the species that is no longer. There can be catastrophic structural changes that result in the loss of entire ecosystems ([Brink, 2025](#)). Predator-prey relationships alter, pests are more common, and

increased predation on alternative species, such as livestock and humans, is likely.

Families who rely on income generated from one species, such as fishing or farming, could face losses. This could be owing to the species becoming too abundant and losing their value, or their disappearance. Farmers who rely on pollination or seed spread by animals could face demand shortages.

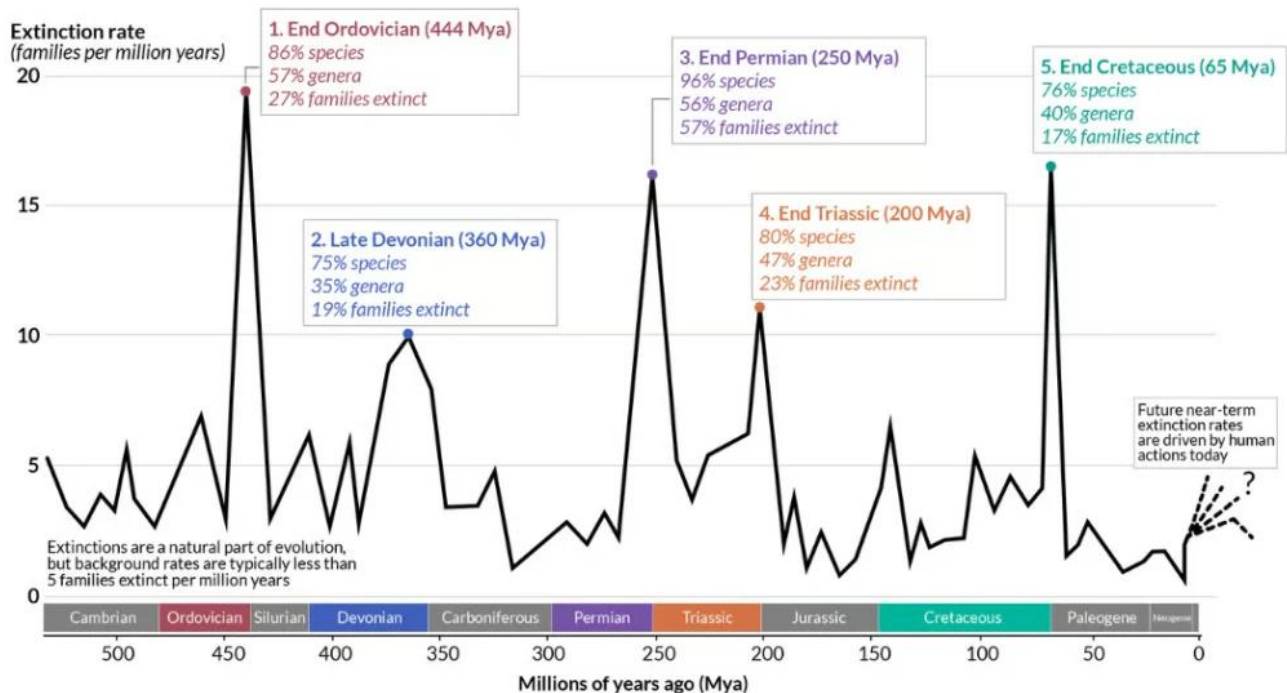
Evidence Pointing Toward a Sixth Mass Extinction

The accelerating rate of biodiversity loss is a key indicator that the Earth may be entering a sixth mass extinction event ([WWF, 2025](#)). If this trend continues unchecked, it is likely to result in substantial further losses of biodiversity over the coming decades. The actions taken now will play a critical role in determining how many species are lost, either helping to prevent or contributing to a sixth extinction event. This rapid decline is driven primarily by climate change, habitat destruction, and the overexploitation of natural resources.

In Australia, medium-sized mammals have declined most severely, with more than 40 species becoming extinct over the past 200 years. Amphibians, reptiles, and small mammals have also experienced significant losses. Official records place the total number of extinctions at over 100; however, more recent studies suggest that as many as 9,000 species, including invertebrates, may have been lost since European settlement in 1788 ([Biodiversity Council, 2024](#)).

'Big Five' Mass Extinctions in Earth's History

A mass extinction is defined by the loss of at least 75% of species within a short period of time (geologically, this is around 2 million years).



Sources: Barnosky et al. (2011); Howard Hughes Medical Institute; McCallum (2015). Vertebrate biodiversity losses point to a sixth mass extinction.

OurWorldinData.org – Research and data to make progress against the world's largest problems.

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A timeline of the five historical extinction events.

Source: [Ritchie, 2022](#)

The current extinction rate is not improving; it is actually accelerating. As seen in the graph above, human actions drive the path of future extinctions. Approximately 48% of all species are experiencing declines, with 7.5-13% already extinct. Known vertebrate populations have declined by 68% over the last 50 years. Should extinctions continue at the current rate, over 1,000 species will go extinct in the next 20 years ([Robinson, 2021](#)).

Linking Biodiversity Data to Policy Action

Policy action has always lagged behind public demand in the environmental domain. Politicians refusing to take action on climate change, or actively working to disprove scientific proof of our changing climate, prevent real action. Politicians often underestimate the willingness of the public and how much they will donate to environmental causes ([Binns, 2025](#)). It has been shown that 86% of the planet expects its governments to contribute more to climate change mitigation ([Ritchie, 2025](#)).

Powerful voices in the fossil fuel and mining industries use underhanded tactics to ensure their environmentally damaging companies continue to dominate markets

while ensuring political support ([Waters, 2024](#)). Ensuring the polluting wealthy remain in control, while disadvantaging the more vulnerable communities. [Values-Based Innovation](#), the FFF that ensures ethical decision-making, aims to ensure that decisions consider multiple points of view, including environmental impacts. In this way, there are minimal environmental impacts, greater protection for species, and future extinction events do not occur.

Improving Metrics for Ecosystem Protection

More work to prevent extinctions must come from government sources. Examples include: policies to strengthen environmental laws, to ensure critical habitat remains intact for threatened species and to ensure resilient communities for generations to come. Standardised metrics are crucial for understanding global biodiversity loss and finding areas in greatest need of protection ([McCormack, 2023](#)). [Context-Based Metrics](#) provide systematic and holistic views to guide actions and ensure optimal solutions. These metrics must consider every continent and ecosystem, with flexibility for our changing climate. However, the scope of this has meant that progress towards a universal metric is considerably slow. Hopefully, with action on climate change, future species extinctions will be kept to a minimum.

Conclusion

More must be done to prevent biodiversity loss. Reducing carbon footprints, sourcing sustainably-sourced products and advocating for greater environmental action are some of the steps that must be taken. At an individual level, people must vote for a leader who will prioritise nature and not cower to lobbyists. A leader who will stand up for the environment and all that it contains ([Darrian-Smith, 2024](#)). Citizen science projects also offer significant insights into wildlife movements, distributions, and population numbers ([FrogID, 2025](#); [iNaturalist, 2025](#)). These can supplement academic research, assisting with identifying populations in need, new population discoveries, and even new species discoveries.

Achieving THRIVE goals: Looking forward to 2030

While the United Nations' [Sustainable Development Goals](#) (SDGs) are vital for helping to move towards a more sustainable planet, they do not go far enough. SDGs have limited abilities in their applicability and scope. This is where the THRIVE FFFs come in. These FFFs build foundations we can all ascribe to, beyond sustainability, to thrivability. Thrivability is where humans and nature flourish together, where they live harmoniously without detriment to either.

[Strong Sustainability](#), the ability of nature to regenerate without human interference, is particularly relevant. Allowing [Strong Sustainability](#), and therefore regeneration, naturally prevents extinctions. This improves biodiversity and creates a healthier world for us all to live. [Science-Based Targets \(SBT\)](#) are the key to achieving [Strong Sustainability](#). [SBTs](#) have a foundation in science. They are created based on scientific findings and advice, cementing their reliability. They work as set goals for achievement. An example is reducing carbon emissions to the levels of decades past, preventing further changes to our climate and assisting global species.

The use of [Values-Based Innovation](#), the consideration of ethics and well-being in decision-making to ensure the best outcome, must occur to prevent species extinctions. This is achieved through creating policies that do not prioritise economics over environmentalism or profit over viability.

A Thrivable Framework

[THRIVE](#) is an international not-for-profit that aims to provide solutions for many of the world's problems. Through internal clusters and the THRIVE Framework, THRIVE volunteers raise issues facing the world, creating public awareness, insight, and potential solutions. These issues are present in [articles](#) published weekly and in [whitepapers](#) published on the [THRIVE website](#). Visit the website to join the [monthly webinar](#) and hear from experts on a range of topics, listen to [podcasts](#) or participate in the interactive [workshops](#). Head to the [YouTube channel](#) to watch [presentations](#), hear about endangered animals or find out what you can do to help biodiversity. [Join THRIVE here](#) to make a change today.

Why trust us?

At *THRIVE Project*, we're all about facts that matter—and a future that flourishes. Our team of researchers, writers, and thriving experts dig deep into the science so you don't have to. Everything we publish is based on credible sources, double-checked for accuracy, and written with one goal in mind: helping you make sense of the world and how to improve it. We're independent, non-profit, and here to spark real change with knowledge you can count on. Find out more about [our team](#).

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