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One-fifth of world's plants at risk of extinction

By David Shukman Environment correspondent, BBC News, Texas



Plants such as artemisia sweet wormwood provide valuable drugs - in this case, for malaria. One-fifth of the world's plants - the foundation of life on Earth - are at risk of extinction, a study concludes.

Researchers have sampled almost 4,000 species, and conclude that 22% should be classified as "threatened" - the same alarming rate as for mammals.

A further 33% of species were too poorly understood to be assessed.

[The analysis](#) comes from the Royal Botanic Gardens at Kew, the Natural History Museum and International Union for the Conservation of Nature (IUCN).

There are an estimated 380,000 plant species in all, and many are victims of habitat loss - typically the clearing of forests for agriculture.

Species in tropical rainforests are found to be at greatest risk.

The study, known as the Sampled Red List Index for Plants, is an attempt to provide the most accurate assessment so far.

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“Start Quote

Plants are the basis of all life on Earth, providing clean air, water, food and fuel”

End Quote Stephen Hopper RBG Kew

Previous studies have focused on the most threatened plants or particular regions.

This one instead sampled species from each of the five main groups of plants, and its authors argue that as a result, their conclusions are more credible.

The report comes ahead of the UN Biodiversity Conference in Nagoya in Japan next month where ministers are due to discuss why conservation targets keep being missed.

Launching the findings, Kew's director, Professor Stephen Hopper, said the study would provide a baseline from which to judge future losses.

"We cannot sit back and watch plant species disappear - plants are the basis of all life on Earth, providing clean air, water, food and fuel.

"Every breath we take involves interacting with plants. They're what we all depend on."

Medicinal properties

The study investigated the key types of plants, including mosses, ferns, orchids and legumes like peas and beans.

The fear among botanists is that species are being wiped out before they can be researched, potentially losing valuable medicinal properties.

Plant-based remedies are the only source of healthcare in the world's poorest countries, and have proved essential in combating conditions including malaria and leukaemia.



Seed and tissue banking is now a key conservation tool

Another concern is that we have become dependent on a narrow range of plants with a limited genetic base.

The report estimates that 80% of the calories consumed worldwide are derived from just 12 different species.

The findings add urgency to the work of Kew's Millennium Seed Bank at Wakehurst in Sussex, which has now gathered some 1.8 billion seeds from around the world.

The samples are catalogued and stored in underground cold rooms as a safeguard against future losses.

The collection includes seeds from plants that have already been judged extinct, including a species of tree from Pakistan and an orchid from Ecuador.

Another victim is a species of olive tree from the South Atlantic island of St Helena.

The only traces of its existence are a few dried pressings of its leaves, and a tiny sample of DNA kept in a plastic test-tube in a freezer.