# [***This is how biodiversity loss impacts medicine and human health***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:69PS-WC11-F0YC-N0CC-00000-00&context=1516831)

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**Body**

Cologny: World Economic Forum has issued the following press release:

Climate change and land-use change are impacting ***biodiversity***, with almost half of the world ’ s flowering plants facing extinction. ***Biodiversity*** ***loss*** is one of the biggest risks facing the world over the next 10 years, according to the World Economic Forum ’ s Global Risks Report 2023. Nature is vital to our health and well-being – and a source of medicine, with more than 40% of pharmaceutical formulations derived from natural sources.

From creating the oxygen we breathe, to the food we eat, plants are essential to human existence. But they ’ re dying out 500 times faster than they did before we walked the Earth.

Tyrannosaurus Rex would have stomped past orchids, for example, as they date back 83 million years, according to scientists at the Royal Botanical Gardens, Kew.

Today, they ’ re some of the world ’ s most threatened plant species, with 56% of the orchid family at risk of extinction, compared with 45% of all flowering plants.

Kew estimates it ’ s likely that around three-quarters of the world ’ s as yet “undescribed” plant species are already threatened with extinction. Some species go extinct even as they are discovered, like Denise ’ s orchid of the falls (Saxicolella deniseae) in Guinea, presumed lost when the construction of a dam flooded the area where it was found.

With an estimated 2.5 million species globally, fungi are second only to invertebrates for species diversity – but as much as 95% of the world ’ s fungi have yet to be discovered and the race is on to find them before they ’ re lost to human-caused climate change, land-use change and the other key drivers of ***biodiversity*** ***loss***.

***Biodiversity*** ***loss*** and ecosystem collapse is among the top five risks facing the world over the next 10 years, according to the World Economic Forum ’ s Global Risks Report 2023, with environmental risks making up six of the top 10 long-term risks.Graphic illustrating the ways in which species diversity differs between animals, plants and fungi.Fungi outnumber all plants and vertebrate animals put together. Image: Royal Botanical Gardens KewBiodiversity ***loss*** and medicines

Besides the life-giving roles plants play, they ’ re also a source of ingredients for both modern and traditional medicines.

Since 2800 BC, orchids, for example, have been used in traditional Chinese medicine to treat conditions from stomach pain to arthritis.

Around one in 10 of the World Health Organization ’ s (WHO) list of “basic” and “essential” drugs originated in flowering plants alone, with more than 40% of pharmaceutical formulations derived from nature.

Fungi, says Kew, are an “increasingly valuable source of bioactive compounds, including antibiotics, immunosuppressants and statins”, the latter of which are used to lower cholesterol.

Taxol, an anticancer agent used in chemotherapy drugs, is found in the bark of certain yew trees. While it can now be made synthetically like many other life-saving drugs, some species of yew, from which it and other compounds were discovered, are under threat.

Some 70% of all cancer drugs are natural or “bioinspired” products, while Parkinson ’ s disease, Alzheimer ’ s and malaria are also among the conditions treated by medicines that include chemicals discovered in plants.Discover

What is the World Economic Forum doing to improve healthcare systems?

The Global Health and Strategic Outlook 2023 highlighted that there will be an estimated shortage of 10 million healthcare workers worldwide by 2030.

The World Economic Forum ’ s Centre for Health and Healthcare works with governments and businesses to build more resilient, efficient and equitable healthcare systems that embrace new technologies.

Learn more about our impact:

Global vaccine delivery: Our contribution to COVAX resulted in the delivery of over 1 billion COVID-19 vaccines and our efforts in launching Gavi, the Vaccine Alliance, has helped save more than 13 million lives over the past 20 years. Davos Alzheimer's Collaborative: Through this collaborative initiative, we are working to accelerate progress in the discovery, testing and delivery of interventions for Alzheimer's – building a cohort of 1 million people living with the disease who provide real-world data to researchers worldwide. Mental health policy: In partnership with Deloitte, we developed a comprehensive toolkit to assist lawmakers in crafting effective policies related to technology for mental health. Global Coalition for Value in Healthcare: We are fostering a sustainable and equitable healthcare industry by launching innovative healthcare hubs to address ineffective spending on global health. In the Netherlands, for example, it has provided care for more than 3,000 patients with type 1 diabetes and enrolled 69 healthcare providers who supported 50,000 mothers in Sub-Saharan Africa. UHC2030 Private Sector Constituency: This collaboration with 30 diverse stakeholders plays a crucial role in advocating for universal health coverage and emphasizing the private sector's potential to contribute to achieving this ambitious goal.

Want to know more about our centre ’ s impact or get involved? Contact us.

The aspirin, known to lower the risk of heart attack, uses a compound originally extracted from the bark of willow, historically, a traditional medicine.

In August 2023, the WHO held its inaugural Traditional Medicine Global Summit and it estimates around 80% of people in most Asian and African countries rely on traditional medicine for primary healthcare.

In 2024, with investment from the Indian government, the WHO will open its Global Centre for Traditional Medicine to harness its potential. The market for traditional medicine was predicted to reach $115 billion by the end of 2023.

But the industry and the lives of those who rely upon it are threatened by ***biodiversity*** ***loss*** and climate change.Saving nature ’ s pharmacy

“You rely on nature if you want to survive: It gives you food, it gives you water, it gives you trees that will protect the quality of the air you breathe,” says Dr Maria Neira, the WHO ’ s Director of the Department of Environment, Climate Change and Health.

“It ’ s common sense: You need to protect what is protecting you. If we don ’ t, we are the losers, not the planet. ”

Conservation is critical to protect the globe ’ s ***biodiversity*** and that means empowering indigenous communities and fostering the sustainable use of plants for medicinal purposes.

In Europe, for example, a team of researchers has recognized the need to “save nature ’ s pharmacy” – from St John ’ s Wort for depression, to Calendula to heal wounds – and has teamed up with EthnoHERBS to survey plants in the Balkans and harness their therapeutic potential.

A combination of satellites and big data are being used to monitor the species and mitigate extinction risk.

Dr Spyros Theodoridis of the Senckenberg ***Biodiversity*** and Climate Research Centre in Germany says: “I see our model being applied to many medicinal plants such as various species of oregano, orchids and primroses under pressure from climate change and over-collection, contributing to the protection of Europe ’ s unique and invaluable medicinal ecosystem services. ”

In December 2022, nations agreed to a landmark target of protecting 30% of the Earth ’ s land and oceans by 2030 at the United Nation ’ s ***Biodiversity*** Conference (COP15).

In January 2023, amid a global health crisis, the World Economic Forum ’ s Global Health and Healthcare Strategic Outlook set out a vision for 2035, which includes environmental sustainability, and technology and innovation as core pillars.

Innovation in medicine will only be possible if we protect the very source of those medicines – nature itself.

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