

More Than 100 Experts Sound Alarm Over Calls to Halt New Genetic Technologies That Could Protect Biodiversity

Global coalition of experts warn a proposed moratorium would close the door on new conservation tools in open letter ahead of World Conservation Congress.

LONDON, UNITED KINGDOM, July 21, 2025 /EINPresswire.com/ -- More than 100 leading

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*Dr. Piero Genovesi, Head of
Wildlife Service, ISPRA*

scientists and experts have issued an urgent warning over a proposed international ban on using genetic technologies in nature, arguing it would block vital research into tackling biodiversity loss and public health crises.

The [open letter](#) comes ahead of the 2025 International Union for Conservation of Nature (IUCN) World Conservation Congress in October, where members will vote on [Motion 133](#) — a proposal to impose a global moratorium on the use of genetic tools in wild species and ecosystems.

Many of these genetic tools fall under the umbrella of synthetic biology, an emerging field combining biology and engineering to design or modify organisms for beneficial purposes.

In conservation, synthetic biology offers the potential to develop targeted genetic interventions that can protect native animals and plants from invasive species or diseases and help restore fragile ecosystems at risk of collapse.

Today, an estimated [one million species](#) worldwide are at risk of extinction, including 44 per cent of coral species, one in three tree species, and more than a quarter of mammals. Current conservation tools are struggling to keep pace with the growing number and complexity of threats to biodiversity – which include habitat loss, invasive species, climate change and pollution – requiring new efforts and innovations to tackle the drivers of extinctions.

The open letter emphasises that the proposed moratorium would freeze research into a promising area of conservation science, just as the world faces what many call the sixth mass

extinction, which has implications for livelihoods and food security, health and climate change.

The letter was endorsed by experts and scientists from over 30 countries representing a range of organisations and institutions, such as the Environmental Defense Fund, Imperial College London, the Australian Wildlife Conservancy and Speak Up Africa.

“Existing conservation tools remain vital, but they are increasingly constrained by high costs, technical limitations, and challenges in scaling solutions, especially in remote or resource-limited regions,” said Dr. Piero Genovesi, Head of Wildlife Service, Italian Institute for Environmental Protection and Research (ISPRA) and Chair, IUCN Species Survival Commission Invasive Species Specialist Group, a signatory of the letter.

“Synthetic biology could offer new approaches to controlling invasive species and diseases, helping to address challenges that have proven difficult or impossible to solve using traditional means. Halting this research now would be a step backward for conservation science and public health.”

The letter highlights that some synthetic biology applications are already under way, such as engineered bacteria to combat coral bleaching and restore microbial balance on reefs, or gene editing to increase resistance to deadly fungal pathogens in critically endangered frogs. But more research is needed to assess the full potential, safety, and limitations of these technologies.

New tools derived from synthetic biology also offer promise for tackling public health issues such as malaria which claims an estimated 600,000 lives every year. For example, genetic tools could help control malaria-transmitting mosquitoes or make them unable to transmit the malaria parasite.

Yacine Djibo, founder of nonprofit Speak Up Africa said: “Malaria is facing a perfect storm of challenges that threaten to destroy progress made against the disease over the past two decades. Closing the door on research means closing the door to potential tools that could help save lives.”

The signatories stressed that IUCN’s proposed policy on synthetic biology (Motion 087) offers a better path forward, as it is science-based, recognising countries’ rights to decide on the use of such tools on a case-by-case basis.

Motion 133 was published on July 9, 2025, among a group of final motions for debate and vote at the IUCN World Conservation Congress, taking place in Abu Dhabi, United Arab Emirates, October

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