INTERNATIONAL FEDERATION OF BEEKEEPERS' ASSOCIATIONS
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APIMONDIA SUPPORTS MORATORIUM ON GENETICALLY ENGINEERING WILD SPECIES IN NATURAL ECOSYSTEMS

Genetic engineering of wild species is a powerful and controversial area of biotechnology that involves directly modifying the DNA of organisms found in natural ecosystems, such as wild plants, animals, and microbes. This field has significant implications for conservation, agriculture, public health, and environmental management, but it also raises complex ethical, ecological, and regulatory questions.

While genetic engineering has achieved some beneficial results in controlling vectors of infectious diseases and eliminating invasive plant species, at the same time it can induce unintended consequences such as uncontrolled spreading, ecosystem disruption, loss of biodiversity and gene flow to non-target species,

The above raise ethical issues such as a) human intervention in nature, b) indigenous and local community rights. They also bring forward regulatory challenges such as a) wild species cross borders but regulations not, b) it is hard to predict the long-term ecosystem impacts.

Apimondia has concerns about the environment as well as about the wellbeing of bees and beekeepers. Beekeeping is under high pressure from pathogens, invasive species, agrochemicals, pollution, loss of food resources and climate change. Above them, the hive products (honey, pollen, propolis, wax) need to stay pure and natural products, as consumers prefer them for food, medicines and cosmetics.

We argue that any decision taken that can possibly affects the beekeeping sector must be taken with the following key considerations:

- Precautionary principle: Proceed cautiously, especially in open environments, exactly as stated in *Cartagena Protocol**
- Robust ecological risk assessments
- Stakeholder engagement, especially with indigenous and local communities
- International coordination

Considering the above, Apimondia supports and call its members to support the following motion:

Motion 133: Moratorium on genetically engineering wild species in natural ecosystems

ACKNOWLEDGING IUCN Resolution 3.007 *A moratorium on the further release of Genetically Modified Organisms (GMOs)* (Bangkok, 2004), Resolution 5.004 *Establishment of the Ethics Mechanism* (Jeju, 2012), Resolution 7.123 *Towards development of an IUCN policy on synthetic biology in relation to nature conservation* (Marseille, 2020) and Resolution 6.086 *Development of IUCN policy on biodiversity conservation and synthetic biology* (Hawai'i, 2016);

AWARE that synthetic biology develops new technologies for genetic engineering, including engineered gene drives, and commonly gives rise to Genetically Modified Organisms (GMO), and

that synthetic biology is converging with generative artificial intelligence (AI) to engineer microorganisms, viruses and genetic elements.

FURTHER AWARE of proposals to expand genetic engineering to wild species in natural complex and interconnected ecosystems, which raises significant conceptual and value questions, as well as biosafety challenges;

CONCERNED that genetic engineering of wild species in natural ecosystems can undermine established and effective nature conservation strategies, many grounded in the traditional knowledge and practices of Indigenous peoples and Local communities;

FURTHER CONCERNED that the genetic engineering of wild species in natural ecosystems, including in protected areas, can be incompatible with the practices, values and principles of nature conservation and the mission and objectives established in the IUCN Statutes;

RECALLING point 3 of the fundamental principles of the IUCN Biosphere Ethics Initiative, recognising the danger of synthetic creations being introduced into the biosphere;

REAFFIRMING the intrinsic value of biological diversity as laid out in the Preamble of the Convention on Biological Diversity;

CONCERNED that genetic engineering of wild species in natural ecosystems is irreversible, and can lead to unforeseeable impacts over space and time that could exacerbate biodiversity loss and significantly damage ecosystems, and may also lead to uncontrollable transboundary movement of GMOs; and

REAFFIRMING, therefore, the fundamental importance of applying the Precautionary Principle, as set out in the 1992 Rio Declaration on Environment and Development, regarding GMOs;

The IUCN World Conservation Congress 2025, at its session in Abu Dhabi, United Arab Emirates:

1. CALLS for a moratorium on synthetic biology and related technological approaches that: a) involve genetically modified wild organisms in natural ecosystems, including engineered gene drive organisms and modified microbial communities; or b) create novel genetic elements in natural ecosystems, until the IUCN World Conservation Congress formally votes to lift the moratorium;
2. CALLS ON the Ethics Specialist Group of the IUCN World Commission on Environmental Law to assess the legal, ethical and conceptual aspects of the genetic engineering of wild species in natural ecosystems, in relation to the practices, values and principles of nature conservation and the mission and objectives established in the IUCN Statutes, and to report to Council; and
3. REQUESTS the Director General to include the present Resolution and Resolution 3.007 into IUCN's public communication materials addressing synthetic biology and genetic engineering.

*Cartagena protocol: The precautionary principle in the Cartagena Protocol on Biosafety states that a lack of full scientific certainty should not be used as a reason to postpone measures to prevent potential serious or irreversible damage to biological diversity from Living Modified Organisms (LMOs). Essentially, if there's a credible threat to biodiversity, and not enough scientific proof to completely rule out a risk, countries should still take preventative steps to avoid or minimize that threat, rather than waiting for definitive evidence.