

WCC-2020-Res-123-EN

Towards development of an IUCN policy on synthetic biology in relation to nature conservation

RECOGNISING the mandate given by Resolution 6.086 *Development of IUCN policy on biodiversity conservation and synthetic biology* (Hawai'i, 2016);

ACKNOWLEDGING the processes contributing towards advancing this subject up until 2016, as documented in the preamble to Resolution 6.086;

FURTHER ACKNOWLEDGING the processes which have advanced the subject since 2016, notably decision XIV/19 of the 14th Meeting of the Conference of Parties to the Convention on Biological Diversity (COP14, Egypt, 2018) and subsequent decisions;

RECOGNISING the work of the IUCN Task Force and Technical Sub-Group on Synthetic Biology and Biodiversity Conservation, established under the authority of all six IUCN Commission Chairs and the Director General, and their work in completing 'Genetic Frontiers for Conservation: An Assessment of Synthetic Biology and Biodiversity Conservation';

REAFFIRMING the fundamental importance to apply the Precautionary Principle regarding applications of synthetic biology and their impact on biological systems and conservation of nature and sustainable development for the prevention of ecosystem destruction and environmental degradation as set out in the 1992 Rio Declaration on Environment and Development and noted in Resolution 3.075 *Applying the Precautionary Principle in environmental decision-making and management* (Bangkok, 2004);

NOTING that in the context of synthetic biology, the precautionary principle deserves specific attention as some applications of synthetic biology can produce organisms with complex modifications of biological characteristics or organisms that intentionally persist, propagate and spread in natural populations;

ACKNOWLEDGING that there remain significant data and knowledge gaps about synthetic biology (including genetic engineering and engineered gene drives), and on ecological, ethical, social and cultural impacts;

AWARE that the field of synthetic biology is advancing rapidly;

NOTING that synthetic biology, including engineered gene drives, continues to be discussed and scrutinised in the Convention on Biological Diversity (CBD) and its Protocols, and in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and

EMPHASISING the unique role of IUCN in engaging governments, non-governmental organisations and indigenous peoples' organisations to foster dialogue in and build knowledge on the topic of synthetic biology in relation to nature conservation;

The IUCN World Conservation Congress 2020, at its session in Marseille, France:

1. REQUESTS the Director General, Commission Chairs and Members to initiate an inclusive and participatory process to develop an IUCN policy on the implications of the use of synthetic biology in nature conservation to be debated and voted on by the next 2024 Conservation Congress. This should follow the process described in Annex section I and for the proposed policy;
2. REQUESTS the Council to, for this purpose, create a working group composed of IUCN Members (NGOs, governments and indigenous peoples' organisations) ensuring a balance among genders, regions, perspectives and knowledge systems, as defined in Annex section II;
3. REQUESTS the Council to establish a drafting and participatory review process for the working group to undertake the development of the IUCN policy on synthetic biology in relation to nature conservation, as defined in Annex section III; and

4. CALLS UPON the Director General and Commissions to remain neutral on all aspects of synthetic biology until the formal adoption of an IUCN policy on synthetic biology, remaining cognisant as new understanding develops during the process.

ANNEX

Section I – terms of reference for the inclusive process

The purpose of this inclusive process is to inform discussions, promote consultation and support improved understanding of synthetic biology and the direct and indirect impacts that this technology might have on biodiversity and its conservation, sustainable use, and the fair and equitable sharing of benefits arising from the utilisation of genetic resources. This inclusive process should identify questions about assessment of areas in which there are significant uncertainties and unknowns. That is to collect, formulate and consider ecological aspects, conceptual and legal challenges and wider questions such as socio-economic, cultural, ethical and legal impacts of the diverse existing and possible future applications of synthetic biology, including gene drives, for nature conservation purposes. A series of processes will be used to undertake a competent and timely process of participatory and anticipatory technology assessment, including community-led foresight and participatory action research.

In this regard, a briefing should be developed early in the process, in order to explain to a broad range of IUCN Members and their respective memberships what synthetic biology is, and why its implications for nature conservation require an inclusive debate. This briefing should recall the process on the topics so far within the context of IUCN.

The process should strive to achieve widely diverse participation across IUCN Members (NGOs, governments and indigenous peoples), genders, regions and knowledge systems, and identify relevant questions for consideration. Several structures and processes should be used, e.g. IUCN national, regional and interregional committees, IUCN regional conservation fora, IUCN Commission processes, grassroots online discussions and roundtables, with appropriate reporting of discussions and summaries of the collected inputs.

Section II – terms of reference for the establishment of the working group

The working group will be composed of IUCN Members (NGOs, governments and indigenous peoples organisations) and Commission members ensuring equal representation of genders, regions, opinions, ethics and knowledge systems. The working group will be established according to the following process:

- a. the Council will request nominations from IUCN Members (NGOs, governments and indigenous peoples organisations) and IUCN Commission members, ensuring equal representation of genders, regions, opinions, ethics and knowledge systems, to join a working group;
- b. the President, drawing on the advice of the IUCN Vice-Presidents and Commission Chairs, will appoint the members of the working group on synthetic biology from among the names nominated; and
- c. IUCN Members will have time to consider and make comments on the overall working group appointed, as well as propose modifications to ensure the diverse representation described above.

The working group will be in charge of steering the development process for the IUCN policy on synthetic biology.

Section III – terms of reference of the policy development process

Section A – Guiding criteria

These guiding criteria should be integrated into the IUCN policy development process on synthetic biology.

The purpose of these criteria is to guide the development of an IUCN policy following the IUCN World Conservation Congress in Marseille. These guiding criteria are not intended to serve as a specific set of guidelines for decision making about the use of synthetic biology (including engineered gene drive), nor are they intended to serve as a risk assessment methodology, technology assessment process or regulatory framework. These guiding criteria should not be interpreted as supporting or opposing the application of synthetic biology.

The scope of these guiding criteria is all aspects of existing and proposed application of the tools and technologies of synthetic biology (including organisms, components and products developed using synthetic biology, and engineered gene drives), in relation to any of their possible negative and positive impacts, over all time scales, spatial scales (including within and between countries), and dimensions of biological diversity (including at genetic, species and ecosystem levels), on the conservation and sustainable use of biodiversity, and on the fair and equitable sharing of benefits arising from the utilisation of genetic resources. This includes consideration of uncertainties.

Integrity and diversity of nature

Intergenerational equity

Gender equity

Respect for rights, beliefs and cultures

Free, prior and informed consent

Inclusion of knowledge holders and right holders

Stakeholder and right-holder participation

Multiple sources of types of knowledge and expertise

Transdisciplinarity, intra-, inter- and multidisciplinary

Multiple values and ethics

Section B – Process

a. Based on the outputs of the inclusive process described above, together with the IUCN Secretariat, the working group will produce a first draft of the IUCN policy on synthetic biology, that is reflective of the input received during the inclusive process, and which draws on the guiding criteria listed in Annex section II and previous resolutions, the IUCN report *Genetic Frontiers in Conservation: Assessment of Synthetic Biology and Biodiversity Conservation*, as well as on other relevant sources of information.

b. The Director General will circulate the draft IUCN policy on synthetic biology to all IUCN Members and Commission members for feedback and comment.

c. The working group will use the comments and feedback received to prepare a second draft of the IUCN policy of synthetic biology, and will explain through the IUCN website how each comment has been handled.

d. The Director General will circulate the second draft IUCN policy on synthetic biology to all IUCN Members and Commission members for feedback and comment.

e. The working group will use the comments and feedback received to prepare a third draft of the IUCN policy on synthetic biology and biodiversity, and will explain through the IUCN website how each comment has been handled.

f. The third draft of the IUCN policy on synthetic biology will be submitted to the IUCN Council, which will transmit it, through a motion, to the next meeting of the IUCN World Conservation Congress for debate and potential adoption by the Members of IUCN.