

Declaration of China Synthetic Biology Youth Researchers on Responsible Research & Innovations and Biodiversity Protection (Draft)¹

We, the young synthetic biology researchers from China, are glad to meet online during the fifteenth conference of parties of the Convention on Biological Diversity. We notice the determination and willingness delivered by the relevant discussions in the conference and the “Kunming Declaration”.

We fully recognize that the field of global biodiversity encounters various challenges and the youth undertake the historical duty and responsibility to promote the protection of biodiversity. Building a shared future for all Life on earth is a great undertaking that the youth should consciously bear.

We recognize that scientific development and technology innovations are the core driving factors of social and economic reforms, and the youth are the important forces of science and technology innovations.

We recognize the discussions, opinions, and decisions reached under the framework of the Convention on Biological Diversity and other protocols.

We recognize that emerging technologies, including synthetic biology, have significant potential in promoting biodiversity protection and realization of sustainable development of human society. We also notice scientific uncertainty and dual-use of synthetic biology, and the resulting issues in biosafety and ethics.

We recognize the importance of the development, assessment, regulation, and management of emerging biotechnologies and we should improve these technologies’ performance to serve the community and resolve global grand challenges. We acknowledge the significance in allowing every individual to benefit from technology innovations, also in preventing and reducing technological risks.

We recognize the discussions and declarations of relevant parties of the convention on the access and benefit-sharing (ABS) of genetic resources, and the application of technology without a suitable benefit-sharing system might have some negative social impacts worldwide.

¹ This draft was discussed and completed by the ShenZhen Synthetic Biology Association, Youth Science Exploration Action Network, Association of Engineering Biology Youth Enthusiast and the iGEMers who participate in the online meeting of ‘COP15 Youth Biodiversity Science Exploration Activity: Synthetic Biology Session’ on 14th October during the first stage of CBD COP 15. It is now open for more advice, comments and engagement, any comments and suggestions could be sent to: szsynbio@siat.ac.cn.

Thus, we commit that:

We will promote scientific exploration and technological innovation of synthetic biology in a responsible manner. We are committed to using scientific and technological innovation to contribute to the society, respond to social concerns, solve major challenges human faced and promote the sustainable development of human society.

We will strictly follow legal rules and experiment regulations to prevent and avoid adverse effects on biodiversity. We will abide by ethical principles and guidelines, actively consider and evaluate the potential impact of scientific and technological innovation on the ecological environment and society.

We will strengthen research and learning in the field of science and technology ethics and biosafety, and strengthen the research and developments of technologies to prevent the environmental escape of living modified organisms and genes. Moreover, we will proactively include consideration and assessment of safety issues and potential risks in our research designs.

We will strengthen the internal dialogue and building of the scientific, technological and innovation community, summarize best practices of responsible research and innovations, promote the formation of the principles and consensus on the research, development and application of synthetic biology.

We will actively promote scientific communication, communicate the results of scientific exploration and technological innovation with a wider range of youth and the public.

We will actively promote cross-field and interdisciplinary youth exchanges and dialogues, accelerating the collaborative and coordinated development of different fields.

We will promote worldwide academic communication and scientific collaboration with our peers. We will play the role of the youth ambassadors of academic exchanges and the protection of biodiversity between China and other nations in the world, specifically promoting technology development and biodiversity protection in developing countries.

We will respect traditional knowledge and intelligence (including regional knowledge) of biodiversity and hereditary resources. We will try to explore the cooperative and inclusive mechanisms of utilizing technology innovations to promote environmental protection the development of local community, let more and more groups of people can enjoy the benefits of technology development.

Millions and millions of lives share the planet earth with us, let us young friends join hands together to protect biodiversity, cherish and care for the beautiful and colorful world.