Third World Network

131 Jalan Macalister, 10400 Penang, MALAYSIA

Tel: 60-4-2266728/2266159
Telefax: 60-4-2264505
E-mail: twn@twnetwork.org
Website: www.twn.my

Dr. Cristiana Paşca Palmer
Executive Secretary
Convention on Biological Diversity

15 June 2017

Dear Dr. Cristiana Paşca Palmer

Re: Submission of information on synthetic biology

Thank you for the notification calling for submission of information on synthetic biology (Ref: SCBD/SPS/DC/DA/MW/86375).

We are pleased to enclose herewith the following documents in response:

1. Lim L.C. (2017) Synthetic biology and relevant international law. TWN Biotechnology and Biosafety Series No. 18. Third World Network, Penang.

This paper looks at the multilateral treaties that apply to various aspects of synthetic biology, including, most notably, the Convention on Biological Diversity and its Cartagena Protocol on Biosafety. Nevertheless, gaps still exist in the international legal framework when it comes to addressing all the potential negative impacts resulting from the application of synthetic biology techniques. In view of this, the paper sets out several elements and principles that could underpin a more holistic regulatory approach towards this emerging new technology.

2. Agapito-Tenfen, S.Z. (2016) Biosafety aspects of genome-editing techniques. Biosafety Briefing, Third World Network, Penang and African Centre for Biodiversity, Johannesburg.

This briefing paper examines the biosafety aspects of new techniques of genome-editing, highlighting some of the current knowledge gaps, including the issues of off-target activity, the lack of reliable identification and detection methods, and the need for precautionary regulation in this regard.

3. ACB (2017). Biosafety Considerations of Novel Plant Breeding Techniques. African Centre for Biodiversity, Johannesburg.

This briefing introduces novel plant breeding techniques such as cisgenesis, intragenesis, techniques that modify the epigenome including RNA interference, agroinfiltration, grafting and reverse breeding. It discusses the biosafety considerations and calls for appropriate and

thorough risk assessment protocols and detection methods that include the latest in molecular profiling for these techniques.

4. ACB (2017). Biosafety Risks of Genome Editing Techniques in Plant Breeding. African Centre for Biodiversity, Johannesburg.

This briefing focuses on genome-editing techniques such as CRISPR and gene drives, zinc fingers, TALENS and oligonucleotide-directed mutagenesis. It discusses the risks associated with these techniques, including off-target activity and additional changes at the target site.

We hope that these documents are useful to the discussions on synthetic biology under the Cartagena Protocol.

Thank you for your kind consideration.

Yours sincerely

Chee Yoke Ling
Director of Programmes