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"Hanging Tough"

Gene Drives are the new kid on the block

Lili Fuhr, Heinrich Böll Foundation

There are probably many delegates who came to COP13 who never had heard about Gene Drives before. And why should they? This is a brand new development that didn't even exist last time the COP met in Korea. There are many reasons why parties concerned about the potential risks and harm caused by any release of Gene Drives should want to put in place a moratorium – primarily the fact that Gene Drives are designed to spread across borders. But if you get told that only new items can get into the text at COP – well there's nothing newer than CRISPR CAs9 Gene Drives:

CRISPR CAS9 Gene Drives are technologically brand new!

➔ The first functioning CRISPR gene drive was first reported in the literature April 2015 - 6 months after COP12. The first patent on RNA-guided gene drives was published in July 2015 – 9 months after COP12.

Gene Drives are news to governments!

➔ The first sustained policy enquiry and analysis of Gene Drives, the Report of the *US National Academies of Sciences* on Gene Drives in non-human research was published in June 2016 – 2 months after SBSTTA 20. That report identified that Gene Drives will need to be addressed by CBD.

The fact that private entities are wanting to deploy Gene Drives and have funding to do so is news!

➔ The *Target Malaria* project first reported on their planned Gene Drive application in Dec 2015 - 3 months after the SynBio AHTEG meeting. *Island Conservation's Project GBIRd* (using Gene Drives to eradicate invasive alien species on islands) was first reported on in June 2016 - 2 months after SBSTTA 20.

A significant influx of funding to the field has now been observed since SBSTTA 20!

➔ The *Bill & Melinda Gates Foundation* increased its investment in Gene Drive development to $75 million just 5 months after SBSTTA 20. DARPA (the US Defence Agency) unveiled its first Gene drive funding call (*Safe Genes Project*) in September 2016. And the *Tata Foundation* invested $70 million in November 2016 - 7 months after SBSTTA 20.

Other international bodies are beginning to address the issue, but not in a comprehensive manner!

➔ The first international policy decision on Gene Drives was in September 2016. The IUCN agreed a de facto moratorium on supporting or endorsing research into gene drives for conservation or other purposes until the IUCN has fully assessed their impacts.

So: Gene Drives are not a fictional theoretical technology that we need to worry about some time in the faraway future, but a well-funded application that will be worked on in laboratories (without adequate biosafety regulations in place) and without an international governance framework to deal with the potential transboundary effects of any future releases.

Parties to the CBD have shown remarkable foresight in the past when it comes to implementing a precautionary approach to some of the most powerful technological innovations (terminator technology, geoengineering, ocean fertilisation).

And we trust that they will do so again in applying the brakes to these genetic extinction tools of Gene drives.

AHTEGs on Risk Assessment and on Socio-Economic Considerations

Third World Network

Several Parties in Working Group 1 yesterday showed an impressive force against continuing the AHTEG on risk assessment and its further work – at a time when many developing country Parties in particular have expressed their need for – and the usefulness of – the guidance on risk assessment.

The issue is now even more urgent than ever, with the developments in synthetic biology. The AHTEG on Synthetic Biology has concluded that living organisms developed through current and near future applications of synthetic biology are similar to LMOs as defined under the Cartagena Protocol. A coordinated approach on synthetic biology, as recommended by the COP-MOP, is therefore clearly needed for risk assessment.

In the COP discussions, it is noted that risk assessment methodologies and principles may need to be updated and adapted for current and future developments and applications of synthetic biology. This is also acknowledged in the call for cooperation to develop guidance and capacity building activities to assess effects of synthetic biology.

The AHTEG therefore needs to be extended to develop guidance on synthetic biology, as well as on LM fish and additional topics, as requested by Parties.

Furthermore, socio-economic considerations are an integral part of a robust and comprehensive assessment of LMOs.

We are here in Mexico, where the issue of contamination of native varieties of maize by transgenes and its impacts on the social and cultural fabric of life, is still very relevant.

It is also relevant with regards to developments in synthetic biology. The organisms, components and products of synthetic biology could result in potential adverse socioeconomic, cultural and ethical impacts.

Product replacement of natural products, such as vanilla, stevia and saffron, will have adverse impacts on the livelihoods on indigenous peoples and local communities who have been conserving and sustainably using biodiversity.

A coordinated approach on the issue of synthetic biology, as recommended by the COP-MOP, would clearly require discussion on socioeconomic, cultural and ethical impacts under both the Convention and the Cartagena Protocol. The AHTEG on Socioeconomic Considerations therefore needs to be extended.

Many Parties, particularly from the developing countries, have requested for guidance to help them implement their right under Article 26 to take socio-economic considerations into account in decision-making. Parties who choose not to exercise this right should not stand in the way of having useful guidance that meets the needs of developing country Parties.

Finally it is critical that membership of the AHTEG include indigenous peoples and local communities as Article 26 emphasises the impacts of LMOs on them. We call on Parties to support and facilitate their full and effective participation by providing the necessary resources.