CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Sixty-ninth meeting of the Standing Committee
Geneva (Switzerland), 27 November – 1 December 2017

Interpretation and implementation matters

General compliance and enforcement

SPECIMENS PRODUCED FROM SYNTHETIC OR CULTURED DNA: REPORT OF THE SECRETARIAT

1. This document has been prepared by the Secretariat.

2. At its 17th meeting (CoP17, Johannesburg, 2016), the Conference of the Parties adopted Decisions 17.89 to 17.91 on *Specimens produced from synthetic or cultured DNA* as follows:

17.89 Directed to the Secretariat

The Secretariat, subject to external funding, is requested to:

a) undertake a review of relevant CITES provisions, resolutions and decisions, including Resolution Conf. 9.6 (Rev. CoP16) on Trade in readily recognizable parts and derivatives, to examine how Parties have applied the interpretation of Resolution Conf. 9.6 (Rev. CoP16) to wildlife products produced from synthetic or cultured DNA, under what circumstances wildlife products produced from synthetic or cultured DNA meet the current interpretation, and whether any revisions should be considered, with a view to ensuring that such trade does not pose a threat to the survival of CITES-listed species; and

b) report the findings and recommendations of this study to the 29th meeting of the Animals Committee, the 23rd meeting of the Plants Committee, and the 69th meeting of the Standing Committee.

17.90 Directed to the Animals and Plants Committees

At the 29th meeting of the Animals Committee and the 23rd meeting of the Plants Committee, the Animals and Plants Committees are requested to review the findings and recommendations of the Secretariat's report in Decision 17.89 and make recommendations for consideration at the 69th meeting of the Standing Committee, including appropriate revisions to existing resolutions.

17.91 Directed to the Standing Committee

At its 69th meeting, the Standing Committee is requested to review the findings and recommendations of the Secretariat's report in Decision 17.89 and the recommendations of the Animals and Plants Committees, and make recommendations for consideration at the 18th meeting of the Conference of the Parties, including appropriate revisions to existing resolutions.

Background

3. Document CoP17 Doc. 27 prepared by the United States of America suggested that a number of companies and researchers might be developing or have developed bioengineered rhinoceros horn and rhinoceros horn powder (see paragraphs 21 to 26 of that document). The document further suggested that although the scientific processes through which these products are being developed may vary, the products appear to be genetically similar or identical to real rhinoceros horn. It also stated that this technology is not unique to rhinoceros horn, and that some of these companies or researchers have indicated that they may produce other cultured wildlife products, including elephant ivory, tiger bone, and pangolin scales. Further information can also be found in information document CoP17 Inf. 22.

4. In its comments on the document, the Secretariat noted that it was aware of reports about wildlife products produced from synthetic or cultured DNA, and given these recent developments, supported the adoption of Decisions 17.89 to 17.91 and recommended that Parties consider the implementation of the Convention as it relates to such products.

5. At its twelfth meeting, the Conference of the Parties of the Convention on Biological Diversity (CBD) (Pyeongchang, 2014) established an Ad Hoc Technical Expert Group (AHTEG) on Synthetic Biology (see decision XII/24). At its thirteenth meeting, the Conference of the Parties to CBD (Cancun, 2016) adopted decision XIII/17, which acknowledged, among other things, an operational definition for synthetic biology as follows: "*synthetic biology is a further development and new dimension of modern biotechnology that combines science, technology and engineering to facilitate and accelerate the understanding, design, redesign, manufacture and/or modification of genetic materials, living organisms and biological systems*." The definition was considered a useful starting point to facilitate scientific and technical deliberations under the Convention and its Protocols.

Progress made since CoP17

6. Pursuant to Decision 17.89, the Secretariat approached potential donors and identified an initial amount of USD 20,000 to conduct the study. A financial contribution to this amount has been generously provided by the United States of America.

7. The Secretariat drafted terms of reference for the study and submitted them for consideration by the Animals and Plants Committees at their joint session (AC29/PC23, Geneva, 22 July 2017, see document AC29 Doc. 15/PC23 Doc. 16). The Committees established a drafting group to finalize the terms of reference for the study on specimens produced from synthetic or cultured DNA, and these are contained in the Annex to the present document.

8. During the preparation of the present document, members of that drafting group brought to the attention of the Secretariat what appears to be a lack of consistency in the use of language in the terms of reference between specimens and wildlife products derived from synthetic or cultured DNA as described in Decision 17.89 paragraph a).

9. It was also noted that the study would be 'incomplete' should it try to address only DNA synthesis, without dealing with its origin and how wildlife products are derived from synthetic or cultured DNA. This should be addressed by the study, including the implications of such a technology as a threat to the survival of CITES-listed species.

10. There is also a need to further clarify the distinction between synthetic DNA (i.e. DNA produced artificially) and DNA originating naturally, as well as the meaning of cultured DNA – if DNA means derived from cultured cells, then presumably it should not differ from DNA that occurs naturally.

11. The Secretariat is in the process of selecting the consultant to undertake the study and intends to report the findings and recommendations of this study to the Animals and Plants Committees at their 30th and 24th meetings respectively, and the Standing Committee at its 70th meeting (SC70) in 2018.

12. The Standing Committee will be invited, at its 70th meeting, to review the findings and recommendations of the Secretariat's report in Decision 17.89 and the recommendations of the Animals and Plants Committees, and make recommendations for consideration at the 18th meeting of the Conference of the Parties, including appropriate revisions to existing Resolutions.

Recommendations

13. The Standing Committee is invited to note this document and provide further inputs on the attached terms of reference as it may deem appropriate.

14. The Secretariat further recommends the establishment of an intersessional Standing Committee working group on specimens produced from synthetic or cultured DNA in anticipation of the study being made available to ensure that preliminary advice on its findings and recommendations is available to the Committee at SC70.

15. The members of the Standing Committee and interested observers are invited to provide relevant information on this matter to the Secretariat, including existing reports and literature, examples of specimens produced from synthetic or cultured DNA, etc.

TERMS OF REFERENCE FOR THE STUDY ON
SPECIMENS PRODUCED FROM SYNTHETIC OR CULTURED DNA

Pursuant to Decision 17.89 and drawing upon document CoP17 Doc. 27 (paragraphs 21 to 26) and other relevant documentation submitted by Parties and observers, the study should review relevant CITES provisions, Resolutions and Decisions, including Resolution Conf. 9.6 (Rev. CoP16) on *Trade in readily recognizable parts and derivatives* and taking into consideration past discussions on specimens covered by the Convention, e.g. ambergris, etc. to examine:

– How Parties have applied the interpretation of Resolution Conf. 9.6 (Rev. CoP16) to wildlife products produced from synthetic or cultured DNA;

– Under what circumstances wildlife products produced from synthetic or cultured DNA meet the current interpretation; and

– Whether any revisions should be considered, with a view to ensuring that such trade does not pose a threat to the survival of CITES-listed species.

First part of the study

Describe in a very concise manner the different ways that DNA can be synthesized, cultured or otherwise produced artificially, in the context of CITES.

Collate existing definitions for the various term, including “cultured DNA”, “synthesized DNA”, “bioengineered” and other relevant terms for the purpose of determining what is covered by CITES.

Prepare case studies involving specimens of CITES-listed species, e.g. rhino horn, ivory, pangolin scales, medicinal plants, fragrances, etc.

Second part of the study

Identify and differentiate relevant legal/regulatory/enforcement and scientific/technological inter-related elements that should be considered by the Standing Committee and the joint meeting of the Animals and Plants Committees.

Elements that may be considered from a legal/regulatory/enforcement perspective:

a) Resolution Conf. 9.6 (Rev. CoP16) interprets the terms ‘readily recognizable’ but does not provide an operational definition for the terms ‘parts’ or ‘derivatives’. The study shall explore the pertinence and relevance of including operational definitions of the terms ‘parts’ and ‘derivatives’ in Resolution Conf. 9.6 (Rev. CoP16) in this context; and

b) The pertinence and usefulness of creating a new source code for “bioengineered” wildlife products as a separate category of specimens.

Third part of the study

Elements to be considered from a scientific/technological perspective:

c) Information on existing or potential tools to distinguish between synthetic and cultured DNA;

d) Information on recent technological developments that produce substitutes for CITES-listed species within the field of synthetic biology; and

e) Information on relevant risk management measures and best practices.

To ensure consistency and to avoid duplication, the consultant shall – in undertaking these tasks – take into account ongoing discussions and work carried out by other relevant international organizations, including the Convention on Biological Diversity and its protocols.