International Fragrance Association (IFRA)

International Organization of the Flavor Industry (IOFI)

Comments on the potential implications of the use of Digital Sequence Information (DSI) on the objectives of the Nagoya Protocol (NP)
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Introduction

In December 2016, at its 13th meeting, the Conference of the Parties to the Convention on Biological Diversity (CBD) adopted decision XIII/16[1] regarding the use of digital sequence information (DSI) from genetic resources (GR) and how regulating these can impact both the CBD and Nagoya Protocol. Decision XIII/16 also established an ad hoc technical expert group (AHTEG) to consult on the implications and pass their decision onto the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). The SBSTTA will make a recommendation at the 14th meeting of the Conference of the Parties on the potential implications resulting from regulating DSI. This short paper represents IFRA and IOFI's contribution to this DSI debate.

DSI are an important source of information also for many Flavour and Fragrance companies with biotechnology related R&D activities. We consider Biodiversity as a highly valuable source of innovation and inspiration for new flavourings, fragrances, or cosmetic ingredients. For this reason, we are strongly committed to the principles of the UN Convention on Biological Diversity and the Nagoya Protocol on Access to Genetic Resources and the Equitable Sharing of Benefits arising from their utilization.

The use of DSI from public databases is growing continuously among multiple sectors, including the Flavor & Fragrance industry.

Finding a workable solution to regulate the use of DSI's under the Nagoya Protocol seems difficult if not impossible. Efforts in that direction show a very high risk to hinder the free flow of (sequence) information, which is central to science and would ultimately also run against the CBD spirit. For this reason, it is the position of IFRA and IOFI to not include DSI in the scope of the Nagoya Protocol.

[1] https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-16-en.pdf

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Position statements and rationale:

1. DSI should not be considered as derivative of GR but as descriptive information on how to build biochemical structures like DNA or respective proteins, and therefore should not be considered to be in the scope of the Nagoya Protocol.

   DSI is information which has been deduced from a living organism in the same way, as for example the phyllotaxis, inflorescence, taxonomic classification, or even the coloring of the flower. DSI is therefore clearly distinct from physical matter derived from the genetic resource itself, like extracts or fractions. Basic research leading to descriptive knowledge should not be regarded as utilization and should not trigger obligations under the Nagoya Protocol. In an analogy, a chemical structure cannot be considered as a physical compound which can be weighed or used for tests, it is merely a scheme of how atoms are connected to each other. The invention of e.g. a chemist, who designs a route to synthesize such a physical compound is clearly distinct from the chemical structure as such a process is an invention/creation on its own.

   Besides the fact that the integration of DSI into the scope of the Nagoya Protocol would place enormous administrative burdens on bio-based research, it is not clear how compliance with the principles of the Nagoya Protocol and related regulatory obligations can be ensured, given that data and information on origin, providers, or sovereign right holders of the initial GR related to DSI are usually not available (or connected with) respective DSI databases. Moreover, many species share a large proportion of their genetic sequence so it is difficult to attribute a sequence to a particular species. Currently, the CBD and the Nagoya Protocol only applies to tangible/material GRs, not information about them. To bring DSI into the Nagoya Protocol would potentially mean that anyone seeking to access and use such information contained in a database or even a journal would need to obtain the consent of the provider of the genetic resource. This means they would potentially need to pay for such access and use, even if they had not had access to the GR or did not know its use or use of DSI was regulated.

   Unlike many GR, DSI can be used indefinitely and having it covered by the Nagoya Protocol could result in an ever increasingly complex picture involving multiple agreements on benefit sharing for any given genetic sequence.

2. The publication of DSI and hence, the description of the GR, as publicly available electronic data alone should be sufficient to prevent individual profiting. Digital sequence data in the public domain provides an extremely useful resource for biodiversity conservation and sustainable management of the natural resources and supports the implementation of the Convention.

3. Restricting open access to publicly available data will likely adversely affect R&D in non-commercial and commercial sectors and may delay or even prevent product development.

   It should be noted that the rationale used for seeking to bring DSI into the scope of the NP appears to apply equally to other information concerning a GR e.g. to chemical structures of compounds found within a GR such as a plant. If extended beyond DSI, it could mean that anyone accessing a journal article containing information about a GR or its components would be obliged to obtain consent to use – or perhaps even reference - that information. The public domain would be subject to regulation and/or restrictions.

4. In the case that DSI would be integrated into the scope of the Nagoya Protocol, for reasons of ensuring aligned national approaches to not disrupt business continuity, we strongly recommend an approach that will ensure harmonization of national implementing systems.

   Having the use of scientific knowledge being regulated by national governments could engage a moral issue by threatening the independence and growth of scientific research and innovation.