

Submission by Poland

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Our contribution to each category of the requested information is as follows:

1. Terminology used in this area

In our opinion, the term 'Digital Sequence Information' is not commonly used or understood by any stakeholder of genetic resources. It is imprecise and unintuitive. We are convinced that it should be replaced by 'Genetic Sequence Data' that is much better recognized and does not cause any scientific controversy.

We do not agree to treat 'DSI' as genetic resources as has been proposed. 'DSI' is neither genetic resource nor genetic material because it is not physical material. In our opinion, this is also not in accordance with Article 2 of the Convention on Biological Diversity, Article 2 of the International Treaty on Plant Genetic Resources for Food and Agriculture and also with Article 2 of the Nagoya Protocol on Access to Genetic Resources and Benefit-Sharing.

2. Actors involved with DSI on PGRFA

- Researchers in the fields of biodiversity, ecology, genetics, genomics, molecular biology and bioinformatics.
- Institutions such as gene banks, research institutes, universities.
- Breeders and breeding companies.
- DNA sequencing international consortia

3. The types and extent of uses of DSI on PGRFA, such as: characterization; breeding and genetic improvement; conservation; identification of PGRFA

Generating and using of 'DSI' is crucial for:

- efficient gene bank management by identification of duplicates, development of core collections
- diversity studies for conservation,
- verification of genetic integrity after long-term storage and regeneration
- molecular taxonomy and identification
- breeding
- comparative genomics for identification genes responsible for important traits

4. The relevance of DSI on PGRFA for food security and nutrition

DSI is a versatile tool for worldwide research aimed at minimizing or excluding food safety problems and sustainable agriculture. It is therefore essential that they should be maintained in an open access for all interested stakeholders in their use. DSI is an effective tool for both *ex* and *in situ* conservation of PGRFA. Systematic genotyping allows gene banks to monitor genetic variability and integrity, identify duplicates, create core collections, taxonomic identification, establish kinship, phylogenetic relations and so on. Omic technologies support crop research on the genetic background of resistance to diseases

or major adaptation features to climate change and other challenges. By using genomic, transcriptomic, proteomic, metabolomic information, breeding processes can and already have been streamlined, shortened and clarified.

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