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Chapeau

Unlocking the power of genebanks for the benefit of current and future generations

To turbocharge the 2030 Agenda, particularly elements which call for transforming agrifood systems, a strategic (SDGs) wDrepositoteffort. This collaboration should focus on establishing sustainable genebanks to ensure their empowerment and functionality. Recognizing genebanks as dynamic contributors to sustainable agrifood systems now and in the future is crucial. Governments and multilateral organisations including the UN system can play a leading role in formulating and supporting policies that prioritize the integration of genebanks into broader agricultural strategies.

Advanced technologies must be harnessed to enhance the efficiency of genebanks, promoting better collaboration and engagement with users, especially local communities. Capacity building initiatives can ensure that genebanks rise to their full potential as dynamic hubs of agricultural innovation. Financial investments are paramount, underlining the need for substantial resources to conserve and document crop diversity effectively. This transformative approach not only aligns with the SDGs but also positions genebanks as catalysts for a paradigm shift in agrifood systems —making them more productive, healthy,

resilient, sustainable, and equitable, ultimately benefiting both current and future generations of humanity and the planet.

Chapter I. Sustainable development and financing for development

Accelerate funding and technical assistance for urgently needed investments into the global genebank system: To empower genebanks to effect meaningful change in agrifood systems, sufficient, guaranteed financial resources are essential. Investments are needed to upgrade and future -proof storage facilities and associated infrastructure, implement robust documentation and information systems, and support research to investigate the genetic potential of genebank holdings to meet user needs now and in the future. Funding safety back-ups of genebank collections, especially of field collections, are also essential, as real- life experience in Syria and elsewhere has shown. International public finance such as multilateral development banks and international climate funds should facilitate countries in making up front investments into the genebank system combined given the long -term benefits and significant return on investment ¹ of secure and accessible essential collections of crop diversity. This support can include dedicated concessional funding packages that promote coordination and combine resources from health, agriculture, biodiversity and climate change agendas delivered along with in -depth technical advisory from specialized entities such as the Crop Trust.

Boost engagement with farmers, farmer organizations, local communities, and development organizations: Genebanks must engage directly with individual farmers, local enterprises, and communities and collaborate with development organizations at scale to reach those people and communities that are growing the food that we all need. Farmers, especially small- scale farmers, many of whom are women, possess invaluable knowledge as traditional custodians of on -farm crop diversity. Genebanks, breeders and researchers should collaborate with farmers in participatory breeding programs, on- farm conservation efforts, and decision -making processes. Initiatives that promote farmer -led seed systems,

conserving crop diversity is needed based on strengthening the connective tissue among genebanks from those at the scale of a village all the way through to those that operate globally. Establishing solid, inclusive, equitable platforms for collaboration, as well as knowledge -generation and knowledge -sharing, enhances the use of diversity, encourages innovation, and accelerates crop improvement and sustainable farming practices. The equitable sharing of crop diversity, and its associated data and best practices is a cornerstone for increasing trust and understanding among nations. By reinforcing the capacity of all genebanks, this collaborative approach not only advances agrifood systems but also serves as a model for fostering global harmony through shared knowledge and joint endeavors.

Chapter III. Science, technology and innovation and digital cooperation

Harness advanced technologies: Genomics², cryogenics³, bioinformatics⁴, and information technologies⁵ are already allowing genebanks to keep more efficiently alive, store, catalogue and analyse vast and diverse collections of annual, perennial and tree crops. But much more is needed. Digital platforms and open -access databases are essential to enable seamless knowledge -sharing and collaboration among genebanks and researchers worldwide. These platforms facilitate the identification of valuable material for crop improvement and other uses, while also ensuring that the rights of traditional owners are respected and that benefits are equitably shared. At the same time, investing in green technologies can make genebanks less costly to run and decrease their carbon footprint, while increasing the use of biotechnologies can improve the storage of species that cannot be stored as seeds. By continuing to harness and embrace existing and developing technologies, genebanks can

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