



**Food and Agriculture
Organization of the
United Nations**



The International Treaty
**ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

Item 16.4 of the Provisional Agenda

NINTH SESSION OF THE GOVERNING BODY

New Delhi, India, 19–24 September 2022

**Report of Norway on the Management and Operations of the Svalbard
Global Seed Vault**

Note by the Secretariat

Through Resolution 12/2019, the Eight Session of the Governing Body invited the Government of Norway to continue updating the Bureau and Governing Body on the management and operations of the Svalbard Global Seed Vault. The report with the Updates on the Management and Operations of the Svalbard Global Seed Vault for the period of 2019–2021 submitted in response to the invitation is contained in Appendix 1.

The Governing Body is invited to take note of the information provided in this document and respond as it deems appropriate, taking into account the elements for a possible Resolution provided in the Appendix 2 to this document for its consideration.

Appendix 1

**UPDATES ON THE MANAGEMENT AND OPERATIONS OF THE SVALBARD
GLOBAL SEED VAULT FOR THE PERIOD OF 2019–2021****I. INTRODUCTION**

1. The Svalbard Global Seed Vault offers genebanks long-term safety storage for duplicates of orthodox seeds; it is operated in line with the FAO Genebank Standards for Plant Genetic Resources for Food and Agriculture (2014). These standards recommend that a "safety duplicate sample for every original accession should be stored in a geographically distant area, under the same or better conditions than those in the original genebank".¹

2. The Svalbard Global Seed Vault was established by the Norwegian Government in 2008, as a contribution to the global community. It is operated in partnership between the Norwegian Ministry of Agriculture and Food, the Nordic Genetic Resource Center (NordGen) and the Global Crop Diversity Trust (Crop Trust).

3. Norway reported to the Eight Session of the Governing Body on the first decade of management and operations of the Svalbard Global Seed Vault. This report provides updates on progress made between then and December 2021. More information on the two seed deposits of 2022 and on the content of the Seed Vault, is made available on the official website of the Svalbard Global Seed Vault¹ and on the Seed Portal– the publicly accessible database on the deposited material in the Seed Vault.²

II. TECHNICAL UPGRADE

4. The comprehensive upgrade of the Seed Vault facility that started in 2018 was completed during 2019. The upgrade, funded by the Norwegian Government, included a completely new tunnel leading from the entrance to the storage rooms 100 m inside the mountain, a new cooling system and a new maintenance building for technical equipment and working rooms. The improved facility has a waterproof entrance and an artificial cooling system that ensures temperatures of - 18 C in the storage rooms and also keep the surrounding rocks at constant low temperatures. As a consequence of these improvements, the Seed Vault's management and operations have also been upgraded. In 2020, a new security and operations management system was set in place, as well as a joint communication strategy for the Seed Vault.

III. SEED DEPOSITS AND SEED WITHDRAWAL

5. Despite the pandemic, the operation of the Seed Vault and the seed deposits have been carried out as planned. In total, 165 999 seed accessions from a total of 71 depositors during the last three years from 2019–2021. In this period, 13 new depositors shipped for the first time, safety duplicates of their seeds to Svalbard. By 31 December 2021, 89 depositors had deposited a total of 1 125 419 bags of seeds for long-term storage in the Seed Vault (see table 1 below).

6. In 2019, the International Centre for Agricultural Research in Dry Areas (ICARDA) withdrew 24 064 seed accessions, and by this completed the withdrawal of all seed samples that were deposited in the Seed Vault from their former gene bank in Aleppo, Syria. In total 116 484 accessions have been returned to ICARDA's new gene bank facilities in Lebanon and Morocco. At the same occasion in 2019, ICARDA deposited 28 500 accessions. Most of them has been multiplied by using seed samples that have been withdrawn from the Seed Vault.

¹ www.seedvault.no

² seedvault.nordgen.org

Table 1. First time depositors to the Seed Vault in 2019, 2020 and 2021.

Depositor	Country	Code	Accessions
2019			
National Agricultural and Food Centre (NAFC RIPP)	Slovak	SVK001	630
Plant Breeding and Acclimatization Institute (IHAR)	Poland	POL003	406
Agricultural Plant Genetic Resources Conservation and Research Centre (APGRC)	Sudan	SDN002	317
2020			
Suceava Genebank” Mihai Cristea” (BRGV)	Romania	ROM007	416
Lebanese Agricultural Research Institute (LARI)	Lebanon	LBN020	453
Royal Botanic Gardens, Kew (MSB Kew)	United Kingdom	R004	³
John Innes Centre Genetic Resources Unit (JIC)	United Kingdom	GBR247	2922
Institut National de la Recherche Agronomique (INRA)	Morocco	MAR123	983
Baekdudaegan national Arboretum (BDNA)	South -Korea	KOR048	10
Julius Kühn Institute (JKI)	Germany	DEU451	2
2021			
Latvian State Forest Research Institute	Latvia	LVA009	153
Institute of Field and Vegetable Crops	Serbia	SRB	96

IV. THE INTERNATIONAL ADVISORY PANEL

7. The mandate of the International Advisory Panel (IAP) is to provide advice on policy and other technical, legal and management issues related to the seed vault. The panel is composed of representatives of depositor institutes, suggested for each meeting of the IAP by Crop Trust and NordGen and approved by the Norwegian Ministry of Agriculture and Food. The Chair of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is invited to act as Chairperson of the IAP. The IAP met in Svalbard in February 2020. The group inspected the Seed Vault and discussed strategies for attracting new seed depositors and new security routines as well as the launch of a 100-year seed longevity experiment for the Seed Vault.

8. The members of the IAP for the 2020 meeting were:

Yasmina El Bahloul, INRA, Morocco (Chair),

Ahmed Amri, ICARDA, Morocco,

Juan Lucas Restrepo, Alliance of Bioversity International and CIAT, Italy

Kristin Børresen, Graminor, Norway,

Godfrey Mwila, Zambia Agriculture Research Institute, Zambia,

³ Two pasture seed mixture samples.

Rosa Lia Barbieri, Embrapa, Brazil, and

Küllli Annama, Estonian Crop Research Institute, Estonia.

V. LONG-TERM SEED STORAGE EXPERIMENTS

9. The 100-year Seed Longevity Experiment in the Svalbard Global Seed Vault started in 2020. The project includes seeds of thirteen different crops and six genebanks as project partners producing seeds for the experiment. The plan is that seeds will be produced and deployed in the Seed Vault over four years. For the next 100 years, the samples will be tested for germination ability every tenth year. Genebanks located in Thailand, India, Portugal, Brazil, Germany and the Nordic Countries produce the seeds for the project.

VI. PRINTING ACCESSION DATA ON NANOFILM

10. Data about seed samples that are deposited in the Seed Vault has previously only been conserved in electronic databases. To increase the security and integrity of accession data, the printing of seed data on nanofilm has been carried out, based on a feasibility study carried out in 2019 by a working group consisting of representatives from the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) and Crop Trust assisted by the International Potato Center (CIP) and NordGen. Preparing the data was completed in 2021 and film has been produced towards the end of the year. Placing film in the Seed Vault and fix film labels to seed boxes will be done in 2022.

VII. ARCTIC CALL TO ACTION FOR FOOD SECURITY AND CLIMATE CHANGE

11. In February 2020, a large seed deposit event marked the finalization of the technical and administrative upgrades, and the beginning of a new operational phase for the Seed Vault.

12. The event welcomed participants from five continents, including representatives from 35 genebanks. In the Seed Summit that preceded, the participants discussed the growing need for genetic diversity for more resilient food systems strategies⁴. The co-chairs of the UN SDG Advocates, the Norwegian Prime Minister, Erna Solberg, and the President of Ghana, Nada Addo Dankwa Akufo-Addo, signed the Arctic Call to Action for Food Security and Climate Change at the Seed Summit. The Arctic Call to Action urges “*governments to step up their efforts to maintain genetic diversity, including through soundly managed seed and plant banks*” and “*encourages gene banks to make use of the Svalbard Global Seed Vault as part of their strategy for securing their important seed collections.*”⁵

⁴ [Svalbard-Seed-Summit-2020-final-003.pdf \(regjeringen.no\)](#)

⁵ Arctic Call to Action for Food Security and Climate Change - International Treaty on Plant Genetic Resources for Food and Agriculture - FAO, available at www.fao.org/plant-treaty/news/news-detail/en/c/1264244/

Appendix 2

Draft decision elements to be integrated in the Resolution on Cooperation with Other International Bodies and Organizations

Recalling Resolutions 12/2017 and Resolution 12/2019;

Recalling that the adoption of the International Treaty gave the impetus to the Government of Norway to proceed with the establishment of the Svalbard Global Seed Vault (Seed Vault);

Reaffirming that the Seed Vault is an important element of the global system for ex situ conservation and use of plant genetic resources for food and agriculture;

1. **Thanks** the Government of Norway for the submission of the report on the management and operations of the Seed Vault and invites it to continue updating the Bureau and Governing Body on the operations and management of the Seed Vault;
2. **Notes** the completion of the structural, technical and administrative upgrades of the Seed Vault, and the new security and operations management system meant to ensure further the integrity of the Seed Vault and security of its contents, and **commends** the Government of Norway for undertaking these upgrades;
3. **Further notes** the 100-year Seed Longevity Experiment in the Svalbard Global Seed Vault started in 2020 and the printing of seed data on nanofilm.
4. **Renews** the invitation to Contracting Parties, international institutions and other relevant eligible bodies and organizations to consider making use of the Seed Vault as part of their strategy for securing their important seed collections and for long-term storage of plant genetic resources for food and agriculture;
5. **Requests** the Secretary to continue collaborating with the Government of Norway and its partners in related activities, including supporting relevant communication and outreach initiatives and in promoting the use of the Seed Vault;
6. **Welcomes** the reconvening of the Seed Vault's International Advisory Panel and **requests** the Chairperson of the Governing Body to continue chairing the Panel and carrying out such functions as the role may require;
7. **Requests** the Secretary to explore further with the Government of Norway other practical means to enhance the linkages between the International Treaty and the Seed Vault, including the linking of data through the Global Information System, and report to the Bureau and the Governing Body.