SVALBARD GLOBAL SEED VAULT

Annual Progress Report 2010
Submitted by NordGen April 2011

Svalbard
Global Seed Vault

Foreword

Since the opening day on the 26th February 2008, the collection of seed samples in the Svalbard Global Seed Vault has more than doubled. By the end of 2010, 603 159 samples are stored in the vault's chamber, with origins from nearly all countries in the world. This already makes the Seed Vault one of the largest single collections of PGRFA globally.

After three years of operation the Seed Vault still functions as an ambassador for the cause of conserving plant genetic resources for food and agriculture. We at NordGen are proud to play a central role for the daily operation of the seed conservation operation. NordGen staff have hosted a large number of visits and have given interviews in both Nordic and international media. The Seed Vault is a flagship project for our organization.

I would like to express my gratitude to our core partners in this project; the Norwegian Ministry of Food and Agriculture, the Global Crop Diversity Trust and Statsbygg. It is a pleasure to work in this partnership. I would also like to thank all our local partners in Oslo and Svalbard who are involved with the seed logistics and ensures a smooth operation in all respects. Finally, it is important to say that Svalbard Global Seed Vault is a truly collaborative project and its success depends entirely on the increasing number of genebanks globally which chooses to send their valuable genetic resources for safety duplication at Svalbard.

Arni Bragason
Director NordGen

Introduction

2010 was the third year of operation of the Svalbard Global Seed Vault. Nine new depositor institutes joined the project and a total of 112 101 new seed samples were deposited. This growth in holdings makes the SGSV one of the world's largest repositories of PGRFA. In terms of international recognition and publicity the SGSV project has kept the momentum from its inauguration in 2008. The importance of the Seed Vault for a sound conservation of crop diversity is recognized in FAO's State of the World's Plant Genetic Resources of the World (SoW) published in 2010, which states that the Svalbard Global Seed Vault represents a major achievement since the first SoW report was published and that "the world's PGRFA is undoubtedly more secure as a result". The influential "Global Biodiversity Outlook " published by the Convention of Biological Diversity in 2010 gives special mention to the important role played by Svalbard Global Seed Vault and the complimentary Millennium Seed Bank for the conservation of plant species and crop varieties for future generations.

This annual progress report is prepared by The Nordic Genetic Resource Center (NordGen), the institution responsible for the daily operation of the SGSV to give an overview of key events in the operation of the Vault in 2010. NordGen's operative responsibility is exercised according to an agreement with our partners in the funding, management and operation; the Norwegian Ministry of Food and Agriculture and the Global Crop Diversity Trust. The Vault's construction was funded by the Norwegian government, and its operation costs are funded by the Global Crop Diversity Trust and the Norwegian government in conjunction.
Operations may be divided into two elements: (1) physical maintenance of the facility overseen by Statsbygg and (2) seed management overseen by NordGen. Thanks to the enthusiasm and cooperative spirit shown by all concerned, from depositors to the local partners at Svalbard, the SGSV has functioned according to its mission in all important respects also this year.

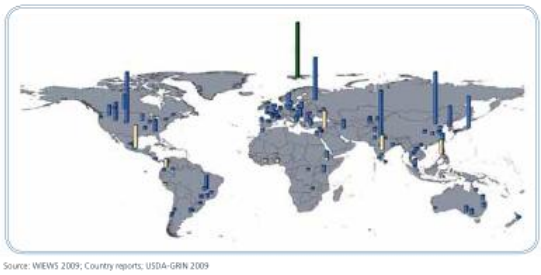

Fig 1. Geographic distribution of genebanks with holdings >10 000 accessions (national and regional genebanks in blue, CGIAR centres in beige and SGSV in green) Source: FAO SoW PGRFA 2010.

Physical maintenance

Since the inauguration in February 2008 the Seed Vault has been fully operational according to its purpose as a high-security seed storage. The seeds are stored in the vault's chamber number two (the middle chamber) and the 603159 samples stored by the end of 2010 fills about 40% of the total storage capacity in this chamber alone.

There have been some technical problems in connection with the construction and the temperature. These problems have been addressed by Statsbygg and entrepreneurs in 2010 and in most important aspects they are now solved. The most notable problem was the damage of the entrance section, the Svalbard tube (summer 2008 and recurring during summer 2009) caused by settling of rock and dirt (due to the fact that the permafrost above was not reestablished prior to spring and thawing). The damage has now been repaired in such a way that the tunnel structure at the entrance is stronger and more secure than before. During 2010, the new tunnel structure have been monitored by external consultants on a regular basis, finding little or no movement in the structure, and Statsbygg considers the situation satisfactory. A new water trench drain and pumping system has been installed to improve the handling of water intrusions in the warm months. Achieving the desired temperature of -18°C has taken longer to achieve than expected. However, in late 2010, -18°C was achieved in Vault 2 and has since been maintained at this level and colder. It is important to note that these problems have not jeopardized the security of the seeds stored inside chamber number two.

Statsbygg reports outcomes of the third party assessments and repair works directly to the Norwegian Ministry of Food and Agriculture and in user meetings with all three partners present. Here we will give a brief summary of the activities undertaken with regard to physical maintenance, while we refer to technical reports available from The Minsitry and Statsbygg for details.

- Statsbygg has engaged the rock engineering department at the Institute of building and infrastructure at the research institute of SINTEF in Trondheim for a third party assessment and quality control of the design work carried out by Barlindhaug Consult /Multiconsult/ EBA for the work to be carried out at the Seed Vault. Their reports have informed the strategy and construction methods.
- The pumping facilities are reinforced and improved. A new and larger pump sump equipped with heat tracing is established. In the new pump sump there are two pumps with one in standby. Improvements are made in the pipeline expelling the water. To secure the power supply to the pumps a backup power supply of 15 kW was installed in early 2011.
- Some terrain adjustment was also done: a) filling of the depression above the portal building in order to reduce the amount of melting water; b) additional material added on the ground surface consisting of cobble and boulder sized rock fill material to prevent accumulation of snow and improve the potential for establishing permafrost below.
- Parametric analyses of the rock/soil fill surrounding the tube was carried out to establish a basis for the design of the physical waterproofing of the tube. A thorough analysis of the forces acting on the steel tube in combination with the effects of water seepage into the backfill, as well as the effects and forces caused by the freezing – in process, was carried out by SINTEF.
- An internal scan of the cross-sections and longitudinal section of the tube in order to achieve the exact measurements for the designs, as well as establishing a benchmark for monitoring any occurring movements and deformations of the tube.
- External consultants (EBA, Canada) were involved to analyze the function of the cooling system and identify the reason why it has taken more time than expected to reach -18°C.

- A central valve in the cooling system was replaced in late 2010 and following this temperatures decreased steadily.
- The cooling system was rectified, and the temperature reached a stable minus 18 degrees by the end of 2010. Extensive temperature measurements are carried out in various locations in hall 2 in order to establish that the specified temperature conditions have been obtained.

Figure 2. The Seed Vault seen from the mountainside of Platåfjellet. Photo by Dornith Doherty

Seed Management

NordGen's role is stated in the *Three Party Agreement between the Royal Ministry of Food and Agriculture of Norway, The Global Crop Diversity Trust and the Nordic Genebank*[1] *providing for the long term funding, management and operation of the Svalbard Global Seed Vault.* The Nordic Genetic Resource Centre is responsible for managing and operating the Seed Vault. This responsibility spans from liaising with PGRFA collection holders interested in depositing seed samples to operation of the databases and the storage process at Svalbard.

NordGen's organization of the work

The overall framework for the tasks to be carried out by NordGen is organized into four platforms, illustrated in Figure 1. A more detailed illustration of the tasks within each platform is described in the following text. A coordinator for the management and operation of the Seed Vault provides overall leadership and internal coordination of entering into deposit agreements, planning and preparing for seed shipments, and handling of the deposit openings on the site. A scientific expert works with public requests for information and visits to the site. All NordGen activities are done in cooperation with the partners, including in particular the Royal Norwegian Ministry of Food and Agriculture (LMD) and the Global Crop Diversity Trust (The Trust).

[1] The Nordic Genebank changed name to the Nordic Genetic Resource Centre (NordGen) in January 2008

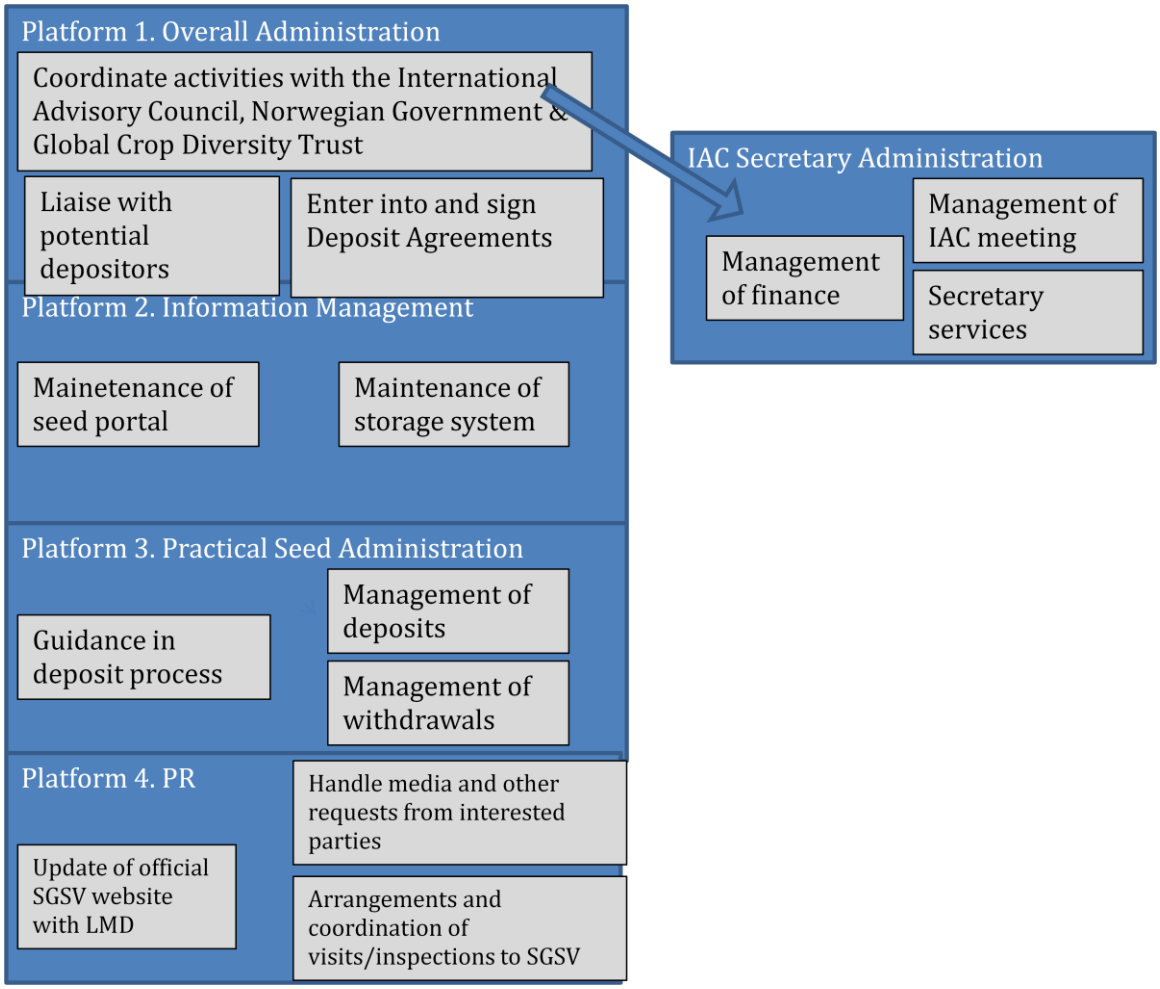

Figure 3. NordGen organization chart for the management and operation of the Svalbard Global Seed Vault.

Platform 1: Overall Administration & IAC Secretary Administration

The overall administration includes coordination and liaising with all relevant stakeholders to SGSV including, but not restricted to, The Royal Minsitry of Food and Agriculture Norway, The Global Crop Diversity Trust, Statsbygg, The Governor of Svalbard, and Depositors. This platform also includes the provision of secretariat services for the International Advisory Council (IAC) in accordance with the Three Party Agreement.

The financial administration covers annual financial statements to be presented to the Trust and the Royal Norwegian Ministry of Food and Agriculture (LMD), bookkeeping's of records and original vouchers in accordance with Nordic Council of Ministries practice. Open book inspection service available for the Trust and the LMD. Further, annual progress reports (covering each year up to Dec 31) submitted by March 31 the following year, are provided by NordGen. Preparation of an annual budget for each financial year (to be approved by the Trust and the LMD), and submitted by April 1, of the year prior to the onset of the budget periods. The secretary administration tasks for IAC lies within (1) budgetary administration (2) planning, arrangements and follow up of IAC meetings and (3) general secretary services for IAC members

In 2010 NordGen, on behalf of the Norwegian Ministry of Food and Agriculture, signed 9 new depositor agreements (See Annex 1 for list of SDAs). By the end of 2010 NordGen had accepted deposits from 32 depositor institutes. Annex 2 provides a list of the deposit institutes and the number of samples in their respective deposits. The largest share of the current holdings in the

SGSV (figure 2) is deposited by International Agricultural Research Institutes (IARCs), represented by several institutes belonging to the Consultative Group of International Agricultural Research Centers (CGIAR) and the Asian Vegetable Research Centre (AVRDC), all hold collections of PGRFA *in trust* for the UN Food and Agriculture Organization (FAO). The composition of the current holding in the SGSV reflects the strategy for operation of the Seed Vault as endorsed by the International Advisory Council: An open invitation has been disseminated to all major genebanks and the public interfaces of the Seed Vault on the Internet welcomes all genebanks that are able to meet the terms and conditions of the Standard Deposit Agreement. This open policy for inviting genebanks to deposit has led to a number of unsolicited proposals for depositing. Only institutions fulfilling the requirements in the Standard Deposit Agreement (SDA) are allowed to deposit. In addition to the general invitation to make use of the SGSV services we have focused efforts on certain collections: The IARC collection holders have been given specific follow-up to ensure that the *in-trust* collections form the core of the SGSV collection. In 2010 we also had an increased focus on safety duplicating collections regenerated with funding from the Global Crop Diversity Trust. The focus on the CGIAR and the project partners of the Global Crop Diversity Trust reflects the strategy and purpose of the seed vault as a back-up repository for a sustainable global system for ex-situ conservation under the auspices of the ITPGRFA. Figure 2 show the share of the current SGSV holdings of genebanks in the Seed Vault according to the categories IARCs, OECD country institute and non-OECD country institute.

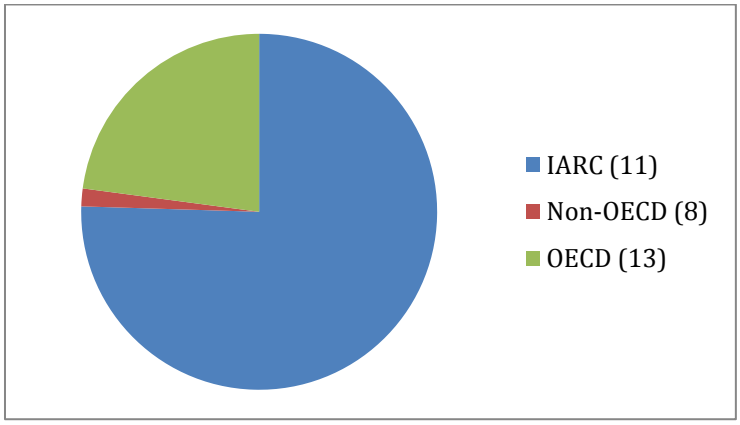

Figure 4. Holdings in SGSV in share of seed samples according to geographic mandate of the depositor institutes. Number of institutes in each category in parenthesis.

The text of the Standard Deposit Agreement was updated to improve information on seed preparation, packaging and shipping procedures. The latest version of the SDA is available in English, French and Spanish at: www.nordgen.org/sgsv

Due to the repair and upgrading work done in the Seed Vault during 2010 the chair of the IAC, in consultation with NordGen and the Norwegian Ministry of Food and Agriculture, decided to postpone the 2010 meeting until the situation in the Seed Vault was evaluated and understood. Thus, there was no meeting of the IAC in 2010.
An overview of the budget and spending is attached here as Annex 2.

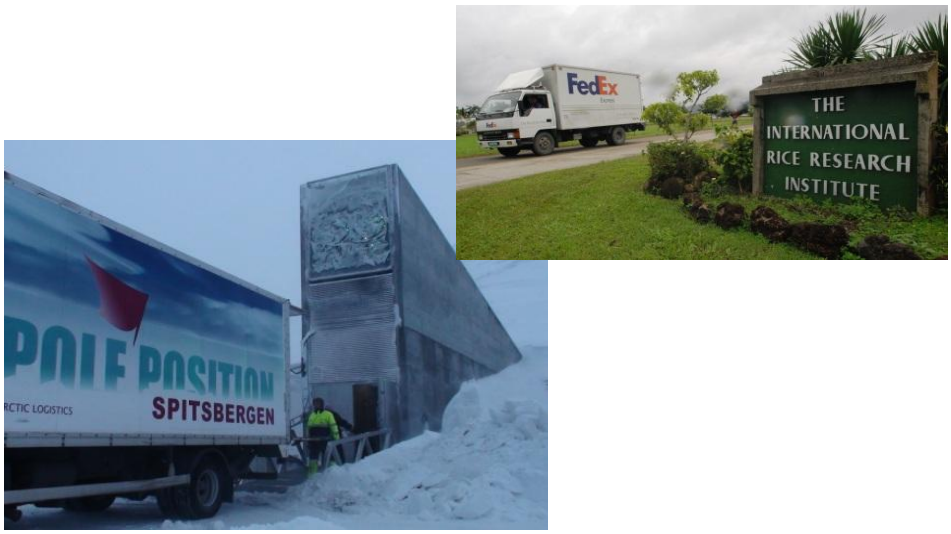

Figure 5. Seed boxes from the Philippines to Svalbard

Platform 2: Information management

This platform serves the development, technical service to depositors, and maintenance of the Seed Vault Data Portal, where information about the stored material is made publicly available through the Internet. The URL for the public data portal site is www.nordgen.org/sgsv. There are links to this portal both from NordGen's homepage and the official webpage of the Seed Vault maintained by the LMD, as well as the website of the Global Crop Diversity Trust. The portal provides access to all the descriptors reported by depositors, in addition the site offers illustration of the data in the form of maps (figure 3).

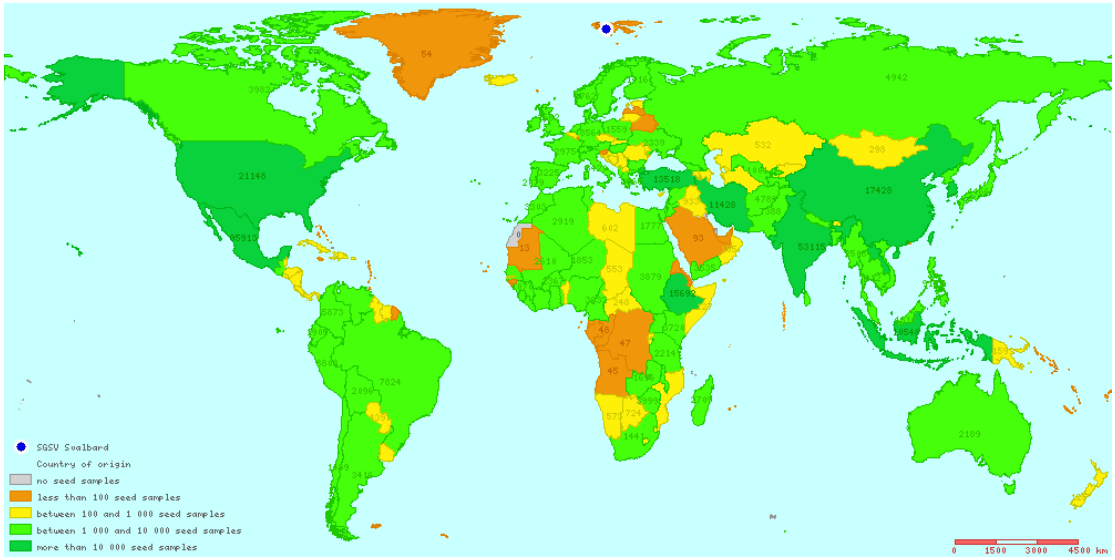

Figure 6. Map of country of origin for seed samples held in SGSV by the end of 2010. Graphics from the data portal at www.nordgen.org/sgsv

The data portal is an important tool in NordGen's interaction with partners, especially the Global Crop Diversity Trust and the depositors. The data portal is also a standard reference for journalists searching for the latest statistics and biological and geographic descriptors of the material stored in SGSV.

The data portal has been developed and updated throughout 2010, including the guidelines for depositing seeds in the SGSV. The database is updated directly following every seed deposit event. Since assurance of data quality is still a matter with potential for improvement NordGen will continue to update and improve guidelines, templates and validation tools to ensure a smooth uploading process. Depositors are required to provide electronic inventories of the material they wish to deposit prior to shipment to Svalbard. The purpose of receiving the data prior to shipment is to allow NordGen to check if the data is of satisfactory quality, as well as to check for obvious duplications of material already stored in the vault. The storage system of SGSV is maintained on separate servers at NordGen headquarters in Sweden. All data are backuped daily to three different locations: a dedicated backup server, tapes stored in a fire safe archive room and finally a remote server located in another town.

Data from the SGSV dataportal is included in the System-wide Information Network for Genetic Resources (SINGER) - the germplasm information exchange network of the Consultative Group on International Agricultural Research (CGIAR) and its partners.

Platform 3: Practical Seed Administration

This platform serves the update and maintenance of guidelines and thus practical depositing and withdrawal of seeds from the Seed Vault. It is closely interlinked with Platform 2 (Information Management) on database management.

Overall management of transport logistics and hence also exit arrangements for seeds deposited is also managed under this platform. The practical seed administration further covers assistance regarding security, customs, phytosanitary certificates and other relevant clearances. LMD is the primary responsible body for the Seed Vault surveillance and maintenance, however, NordGen work closely with Statsbygg who is the responsible institution for the surveillance and maintenance of the constructions of the Seed Vault.

The work in this platform is primarily carried out by the coordinator of operations and management, but draws on expertise and assistance from the seed technicians at NordGen headquarters. The major part of this work takes place on site at Svalbard and the coordination of all practical aspects of the deposits relies on close cooperation with several local institutions and resource people in Oslo and at Svalbard: Logistics from Oslo to Longyearbyen is currently handled by the logistics company Jetpak; logistics at Svalbard is handled by the company Pole Position; screening and security at arrival Svalbard is handled by the security company Securitas as well as the airport management at Longyearbyen airport Svalbard; Statsbygg provides support with logistics and technical backstopping during deposit events.

Figure 7. Bringing new boxes into the Seed Vault. Photo by Dornith Doherty

Due to the repair and upgrading work in the Seed Vault in 2010 only 3 regular deposit openings were held. The shipments planned for summer and autumn were all concentrated for one major deposit event in November. Six new depositors joined the project in 2010: The national genebanks of Georgia, Uganda, Israel, Democratic People's Republic of Korea (DPRK), Sudan and Peru.

Table 1: Deposit openings in 2010

2010-10/03

DATASET	INST	BOXES	ACCESSIONS	SEEDS	COUNTRIES	GENUS	SPECIES	TAXA
COL003	CIAT	11	3 837	2 041 900	94	59	202	203
GEO001	Georgia	3	305	465 437	1	7	19	84
MEX002	CIMMYT	16	15 471	3 867 750	1	3	4	4
PER001	CIP	1	978	137 190	9	2	102	115
UGA031	NARO	1	262	4 244 024	2	1	1	1
USA996	NPGS	30	10 522	94 099	50	10	17	17
USA974	SSE	1	436	1 117 600	141	123	297	324
SUM	**7**	**63**	**31 811**	**11 968 000**	**159**	**177**	**614**	**725**

TOTAL	**28**		**522 585**	**334 033 140**	**226**	**714**	**3707**	**6430**

Total this shipment approximately, 12 million seeds; weight: 1 000 kg; volume: 5,1 m^3 (5 059 liter).

2010-05-03

DATASET	INSTITUTE	BOXES	ACCESSIONS	SEEDS	COUNTRIES	GENUS	SPECIES	TAXA
TWN006	TARI	8	3 260	652 000	1	1	1	1
SUM	**1**	**8**	**3 260**	**652 000**	**1**	**1**	**1**	**1**

TOTAL	**29**	**1486**	**526 129**	**334 685 140**	**226**	**714**	**3710**	**6433**

Total this shipment approximately, 0.65 million seeds; weight: 150 kg; volume 0,6 m^3 (642 liter)

2010-11/11

DATASET	INST	BOXES	ACCESSIONS	SEEDS	COUNTRIES	GENUS	SPECIES	TAXA
CIV039	WARDA	4	2500	1000000	58	1	4	4
IND002	ICRISAT	57	24000	42306372	112	7	8	8
ISR003	ICCI	1	450	22500	2	2	2	2
PHL001	IRRI	69	42627	20492693	114	5	27	38
PRK013	AAS	9	2857	1428500	1	2	2	2
SDN034	ARC	2	1195	945800	1	3	4	4
SWE054	NORDGEN	1	668	331800	20	68	87	93
TWN001	AVRDC	5	1925	616100	53	6	28	33
UKR001	UAAS	4	808	404000	28	5	7	8
SUM	**9**	**152**	**77 030**	**67,547,765**	**164**	**86**	**158**	**182**

TOTAL	**32**	**1494**	**603 159**	**393 338 405**	**227**	**719**	**3727**	**6470**

This shipment approximately, 393 million seeds; weight 2 500 kg; volume 12 m^3 (12 205 liter)

Total by year

Year	INST	BOXES	ACCESSIONS	SEEDS	COUNTRIES	GENUS	SPECIES	TAXA
2008	22	818	320 553	219 713 731	210	638	3 001	4 106
2009	18	452	170 505	100 286 409	193	311	1 286	1 985
2010	17	223	112 101	82 239 765	183	237	742	877
Total	32	1 492	603 159	82 239 765	223	718	3 725	5 390

The year 2010 saw a substantial increase in the holdings in SGSV: 112 101 new seed samples were deposited. This increased holdings by 23% and the total holding by the end of the year was 603 159 samples. The statistics from the data base (figure 6) shows that wheat and rice are still the crops best represented in terms of number of samples in the Seed Vault.

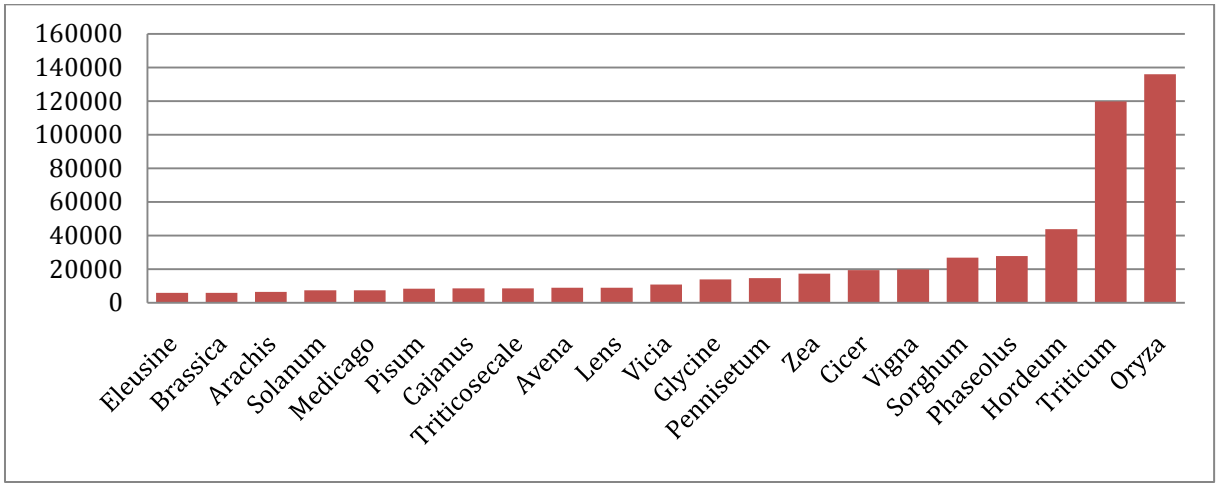

Figure 8. Statistics of holdings for genera with more than 5000 samples by the end of 2010

4: PR

The development and maintenance of NordGen-SGSV website are carried out within this platform, together with press and journalist correspondence in general and arrangement and coordination of visits/requested inspections to SGSV.

There are still an increasing number of requests for visits, interviews, lectures or of answering particular questions connected to The Global Seed Vault or more general comments of conservation and utilization of genetic resources. In 2010 more than 100 inquiries from 27 countries from all over the world were obtained. Most requests came from Norway (17), Germany (13), UK (12) and Sweden (11). More than 70 requests dealt with the possibility to visit The Vault – for various reasons. The majority, 45 requests, came from different media. Altogether 26 visitors (groups or individuals) were allowed to visit the Vault in 2010 at 10 occasions. This has resulted in a number of media exposures of The Vault in TV, radio, newspapers and magazines. It is, however, difficult to get a feed back about publication and other media exposures why there is no complete overview of the results of the visits. An unexpected large category of visitors is dealing with various art projects like books, articles for art magazines, and art photography for exhibitions. These projects are attracted by the architecture, particularly the light and structure of the Vault. Images from the Vault have recently been included in exhibitions in New York and Zürich and in a web-based art publication.

A large category of visitors (8) represents the political system or international policymakers. Among them was the Indian minister of Science and Technology together with an Indian delegation invited by the Norwegian minister of Education and Research. In July a group of US senators visited The Vault and in August a group of advisors to the US Congress was there as well as a delegation from The Royal Swedish Academy of Forestry and Agriculture.
The interest for interviews and particular questions regarding plant genetic resources (PGR) in general and the Vault in particular increases. There seems also to be an increasing interest for lectures around PGR and The Vault. In connection with visits by larger groups it is desirable to give an introductory lecture about the conceptual ideas behind conservation and utilization of plant genetic resources prior to visiting the Vault.

Ca 30 requests for visits were not accomplished depending either on the difficulty to find suitable dates for visits or the requests were rejected for other reasons. As earlier experienced it is still difficult to match all serious inquiries for visits since NordGen has no permanent staff stationed in Longyearbyen. The visiting policy also underlines the importance of safety and security why visits should be restricted since each person entering the Vault influences the temperature negatively. Due to the risk of influencing the temperature visitors are since the autumn 2010 generally not allowed into chamber 2, i. e. were the seeds are stored.

NordGen, who is responsible for the seed management, makes a time planning for visits, for example, when new shipments are expected. The aim is to have the Vault accessible for visits 4-6 times pro year at those occasions when NordGen staff or representatives for The Global Crop Diversity Trust or The Norwegian Minstry of Food and Agriculture are present on Svalbard. The collaboration with the local office of Statsbygg, responsible for monitoring and daily operation of The Vault, runs very smoothly.

Annex 1- List of signed Standard Depositor Agreements

Institute	**Date (DD.MM.YY)**
WARDA - Benin	05.02.2008
CIAT - Colombia	21.02.2008
CIMMYT - Mexico	01.11.2007
CIP - La Molina, Peru	01.11.2007
ICARDA - Syrian Arab Republic	30.01.2008
ICRISAT - India	01.11.2007
IITA	21.11.2007
ILRI - Ethiopia	28.11.2007
IRRI, Manila - Philippines	01.11.2007
ICRAF, Nairobi - Kenya	30.01.2008
AVRDC,	14.11.2007
CGN, Wageningen	06.02.2008
Goldman, Seed Savers	30.01.2008
NARC, Pakistan	06.02.2008
IPK, Gatersleben	06.02.2008
KARI - Kenya	06.02.2008
ITCC/RDA - Korea	07.05.2008
Institute of Agriculture - Skopije	26.06.2008
Embrapa - Brazil	28.06.2008
Vavilov Institute - Russia	07.06.2008
Agroscope Changins-Wadenswil	17.12.2008
Departement of Agriculture, Fisheries and Food - Ireland	26.01.2009
Teagasc, Crop Research Centre, Carlow - Ireland	26.01.2009
The National Bureau of Plant Genetic Resources - New Delhi	20.02.2009
National Centre for Plant Genetic Resources - Ukraine	25.05.2009
Taiwan Agriculture Research Institute	26.02.2009
Canadian Genetic Resource Program, Saskatoon - Canada	19.05.2009
I Lomouri Research Institute of Farming - Georgien	26.02.2010
Pyongyang Crop Genetic Resources Institute - DPR Korea	19.03.2010
Ugandan Plant Genetic Resources Centre - Uganda	09.04.2010
Univeridad Nacional Agraria, La Molina - Peru	26.05.2010
Institute for Cereal Crops Improvement, Tel Aviv University - Israel	29.06.2010
Arizona Board of Regents Univerisity of Arizona	02.09.2010
Centro Agronomico Tropical CATIE - Costa Rica	04.10.2010
PGR Unit Agricultural Research Corporation - Sudan	19.10.2010
SPGRC Plant Genteic Resource Centre - Zambia	16.11.2010

Annex 2. Total holding per depositor

Institute	*Acronym*	*WIEWS code*	*Accessions*	*Seed boxes*	*Taxa*	*Countries*
Georgia Genetic Resources Centre	*GGRC*	*GEO001*	*305*	*3*	*84*	*1*
Canadian Genetic Resources Program, Saskatoon Research Centre	*PGRC*	*CAN004*	*9233*	*72*	*191*	*87*
Station Federale de Recherches en Production Vegetale de Changins	*RAC*	*CHE001*	*9665*	*23*	*7*	*61*
Africa Rice Center	*WARDA*	*CIV039*	*12439*	*22*	*7*	*80*
Centro Internacional de Agricultura Tropical	*CIAT*	*COL003*	*37948*	*114*	*528*	*131*
Leibniz Institute of Plant Genetics and Crop Plant Research	*IPK*	*DEU146*	*22350*	*37*	*2298*	*120*
International Livestock Research Institute	*ILRI*	*ETH013*	*4008*	*7*	*515*	*92*
International Crop Research Institute for the Semi-Arid Tropics	*ICRISAT*	*IND002*	*68003*	*193*	*12*	*127*
Oak Park Research Centre	*AFT*	*IRL001*	*577*	*1*	*7*	*1*
Department of Agriculture, Food and Rural Development	*DAFF*	*IRL029*	*100*	*1*	*4*	*4*
Institute of Creal Crop Improvement, Tel Aviv University	*ICCI*	*ISR003*	*450*	*1*	*2*	*2*
National Genebank of Kenya	*NGBK*	*KEN015*	*1314*	*3*	*6*	*9*
World Agroforestry Centre	*ICRAF*	*KEN023*	*508*	*4*	*130*	*28*
National Agrobiodiversity Center	*NAC*	*KOR043*	*13185*	*48*	*36*	*1*
Centro Internacional de Mejoramiento de Maiz y Trigo	*CIMMYT*	*MEX002*	*95963*	*218*	*15*	*59*
International Institute of Tropical Agriculture	*IITA*	*NGA057*	*11414*	*37*	*50*	*100*
Centre for Genetic Resources	*CGN*	*NLD037*	*18212*	*38*	*224*	*147*
Plant Genetic Resources Institute, National Agricultural Research Centre	*PGRI-NARC*	*PAK001*	*1597*	*2*	*13*	*1*
Centro Internacional de la Papa	*CIP*	*PER001*	*6825*	*3*	*296*	*23*
International Rice Research Institute	*IRRI*	*PHL001*	*112807*	*167*	*64*	*129*
National Plant Genetic Resources Laboratory	*NPGRL*	*PHL005*	*500*	*1*	*4*	*16*
Pyongyang AAS	*AAS*	*PRK013*	*2857*	*9*	*2*	*1*
N.I. Vavilov All-Russian Scientific Research Institute of Plant Industry	*VIR*	*RUS001*	*945*	*13*	*111*	*69*
Agricultural Research Corporation, Wad Medani	*ARC*	*SDN034*	*1195*	*2*	*4*	*1*
Nordic Genetic Resource Center	*NORDGEN*	*SWE054*	*13366*	*30*	*325*	*77*
International Centre for Agricultural Research in Dry Areas	*ICARDA*	*SYR002*	*94354*	*252*	*705*	*125*
The World Vegetable Center	*AVRDC*	*TWN001*	*11027*	*33*	*122*	*100*
Taiwan Agricultural Research Institute	*TARI*	*TWN006*	*7278*	*14*	*2*	*1*
National Agricultural Research Organization	*NARO*	*UGA031*	*262*	*1*	*1*	*2*
Institute of Plant Production n.a. V.Y. Yurjev of UAAS	*UAAS*	*UKR001*	*1693*	*10*	*43*	*43*
Seed Savers Exchange	*SSE*	*USA974*	*1389*	*5*	*42*	*82*
National Plant Germplasm System	*NPGS*	*USA996*	*41390*	*129*	*1234*	*168*

Annex 3. Budget and Spending 2010

Activity	Cost Category	Items	Cost basis		Budget 2010	Actual spending
			SEK	Qty	SEK	SEK
709502: Coordinator	Personnel [a]	Coordinator	89 000	6.6	587 400	458 687
	Travel [b]	To Svalbard and other destinations	15 000	8	120 000	52 929
	Communication / supplies	Phone, computer,printer, mailing etc.	30 000	1	30 000	27 118
Sub-total					**737 400**	**538 733**
709503: Platform 1 Overall Administration	Personnel [a]	Director and Finance Director	155 000	0.8	124 000	145 095
	Communication / supplies	Phone, printer, mailing etc.	10 000	1	10 000	48 886
	Travel [b]	1 trip to Svalbard	15 000	1	15 000	1 041
Sub-total					**149 000**	**195 022**
709504: Platform 2 Information Management	Personnel [a]	IT-manager	89 000	1.5	133 500	177 601
	Travel [b]	Trips to Svalbard	15 000	3	45 000	13 157
	IT System	Server, web	36 000	1	36 000	58 128
Sub-total					**214 500**	**248 887**
709505: Platform 3 Practical Seed Administration	Personnel	Seed Technician	89 000	0.5	44 500	42 610
	Travel [b]	1 trip to Svalbard	15 000	1	15 000	380
		Vehicle hire, local supplies	20 000	1	20 000	20 955
Sub-total					**79 500**	**63 945**
709506: Platform 4 PR	Personnel [a]	Information Coordinator	89 000	0.25	22 250	
		Scientific information expert	130 000	3.6	468 000	498 011
	Travel [b]	To Svalbard and other destinations	15 000	8	120 000	33 493
	Materials for media	External filming, editing and multiplication	50 000	1	50 000	55 384
	Communication / supplies	Phone, printer, mailing etc.	20 000	1	20 000	6 882
Sub-total					**680 250**	**593 771**
709507: International Advisory Council	Total planned				325 500	31 831
Sub-total					**325 500**	**31 831**
709508: SGSV Biannual Seminar 2011 - *planning*	Personnel	Director, Information, IT, Administration	89 000		0	127 350
	Travel	2 trips to meetings - 5 persons*5000 SEK	25 000		0	20 796
	Materials, Communication	Information material, phone, printer, mailing etc.	40 000		0	326
Sub-total					**0**	**148 472**
Pilot Project - Long Term Storage project		Testing, Testing Materials, Procedures	50 000	1	50 000	26 061
Sub-total					**50 000**	**26 061**

Total costs	**2 236 150**	**1 846 721**
Result 2010 SEK		**389 429**
TOTAL SEK	**2 236 150**	**1 846 720**
TOTAL US$ [(d)]	***$319 769***	

Note: A Working capital Fund was established in 2007.

[(a)] NordGen Personnel costed at avg SEK 89,000/month
[(b)] Travel costed at SEK 15,000/trip
[(c)] Travel costed at SEK 12,500/trip
[(d)] Based on exchange rate at December 2010: 1 Swedish Krone = 0.147 US Dollar