SVALBARD GLOBAL SEED VAULT

Annual Progress Report 2012

NordGen, April 2013

Svalbard
Global Seed Vault

Contents

2012 at a glance

- 58 028 new seed samples from 27 depositors were stored in 2012. This increased holdings by 8% and the total holding by the end of the year was 774,601 samples.
- Chamber two is now filled to 75% of its current capacity.
- 9 new depositors from Mongolia, Azerbaijan, Chile, Portugal, Burundi, Mali, Georgia, Philippines and Armenia signed the Standard Deposit Agreement and deposited material in 2012.
- The Standard Deposit Agreement was revised and updated in 2012 and introduced in January 2013.
- 14 visits were arranged and 119 media and visit inquiries from 29 countries were received in 2012.

Foreword

In 2012, the fifth year of operation, the number of genebanks safety duplicating in the Svalbard Global Seed Vault continued to increase. Total holdings at the end of the year stood at impressing 774,601 seed samples deposited by 53 genebanks from around the world.

The Seed Vault now plays its intended role; it is a global safety storage site for an international *ex-situ* conservation system for the world's plant genetic resources for food and agriculture. NordGen is proud to be part of this historic effort. The current collection in the Seed Vault is testimony to the truly global collaborative nature of this project. It is the users of the Seed Vault, the depositors, that makes the Seed Vault the success it is.

All NordGen's activities are done in close cooperation with the Norwegian Ministry of Food and Agriculture (LMD) and the Global Crop Diversity Trust (the Trust). I would like to express my gratitude to LMD and the Trust for the good cooperation and support in 2012. I would also like to thank Statsbygg and our local partners in Oslo and Svalbard involved with the seed logistics.

Arni Bragason

Director NordGen

Introduction

The Svalbard Global Seed Vault (SGSV) is today the world's largest repository of PGRFA. By the end of 2012, 774,601 safety back-up samples from 53 genebanks were deposited in the Seed Vault. Thanks to the enthusiasm and cooperative spirit shown by all involved, from depositors to the local partners at Svalbard, the SGSV has functioned according to its mission in all important respects also this year.

2012 was the fifth year of operation of the SGSV. Nine new depositor institutes sent material and a total of 58 028 new seed samples were deposited. In terms of international recognition and publicity the SGSV project has kept the momentum from its inauguration in 2008. In 2012, NordGen received altogether 119 requests for visits, interviews and talks from 29 countries and 62 different media.

This annual progress report is prepared by the Nordic Genetic Resource Centre's (NordGen) to give an overview of key events in the operation of the Vault in 2012. NordGen's responsibilities for the management of seed deposits are 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 Vault's construction was funded by the Norwegian government, and its operation costs are jointly funded by the Trust and the Norwegian government. Operation of the Seed Vault consists of two aspects: (1) Physical maintenance of the facility, overseen by Statsbygg and (2) Safety seed deposit management, overseen by NordGen.

Management of physical facility

Since the inauguration in February 2008 the SGSV has been fully operational according to its purpose as a high-security seed storage. SGSV is the property of Statsbygg which is the Norwegian directorate for public constructions. The property management and daily monitoring of the SGSV is Statsbygg's responsibility. The Norwegian Ministry of Agriculture (LMD) is the national authority liable for the SGSV and the property management duties of Statsbygg are stated in the lease-agreement between LMD and Statsbygg. Statsbygg reports on the daily operation and the outcomes of work on the physical facility to LMD in user meetings. NordGen has been present in all such meetings also in 2012.

The Seed vault is a one-of-a-kind facility and the first five years of physical operation has met with some challenges: 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 re-established 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. During 2010 -2012, the new tunnel structure has been monitored by independent external consultants from Multiconsult on a regular basis, finding little or no movement in the structure. Achieving the desired temperature of -18°C in chamber 2 (where the seed are stored) took longer to achieve than expected. The target temperature was reached by the end of 2010 and has been stable throughout 2011 and 2012. Statsbygg in November 2012 reported a satisfactory situation with regard to 1) the

[1] The Nordic Genebank changed name to the Nordic Genetic Resource Centre in 2008.

temperature in chamber 2 and all others parts of the facility; 2) the tunnel movement; 3) the back-up power-supply. The remaining problem is the recurrent water intrusion which has to be pumped out during the summer months. Statsbygg was by the end of 2012 working to find a permanent solution to the water intrusion problem. It is important to note that these problems have not jeopardized the security of the seeds.

Major events in the management of the physical facility in 2012:

01.03. Security consultants from "Forsvarsbygg Futura" engaged by LMD visits SGSV to make a security report with regard to all security and safety aspects of the Svalbard Global Seed Vault.

13.03. The Longyearbyen authority for fire protection decided to prohibit any guided visits to the Seed Vault with immediate effect.

03.05. The security report from Forsvarsbygg Futura was presented by LMD in a user meeting in Oslo. LMD and NordGen was present for the meeting.

05.06. Nordgen received report about the spring's first water intrusion in the tunnel from the local Statsbygg in Longyearbyen.

21.06. NordGen receives message about a new responsible property manager in Statsbygg: Bente Næverdhal 09.10. Inspection and user meeting with Statsbygg in Longyearbyen. A follow-up plan on recommendations from the report was agreed. LMD and NordGen was present for the meeting.

October-December. Statsbygg follows-up with further measures to improve personnel security (first-aid equipment etc.)

December. Water intrusion continued in December month. This problem has never continued this late into the winter earlier.

07.12. Fire in the power plant in Longyearbyen. The back-up power supply in the Seed Vault functioned well. No effect on temperature in chamber 2.

Safety Deposit Management

NordGen is responsible for managing and operating all aspects of the safety deposit process. This responsibility spans from liaising with collection holders interested in depositing seed samples to operation of the databases and organization of the storage process at Svalbard.

The overall framework for the tasks carried out by NordGen is organized into four platforms, illustrated in Figure 2. 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 LMD and the Trust.

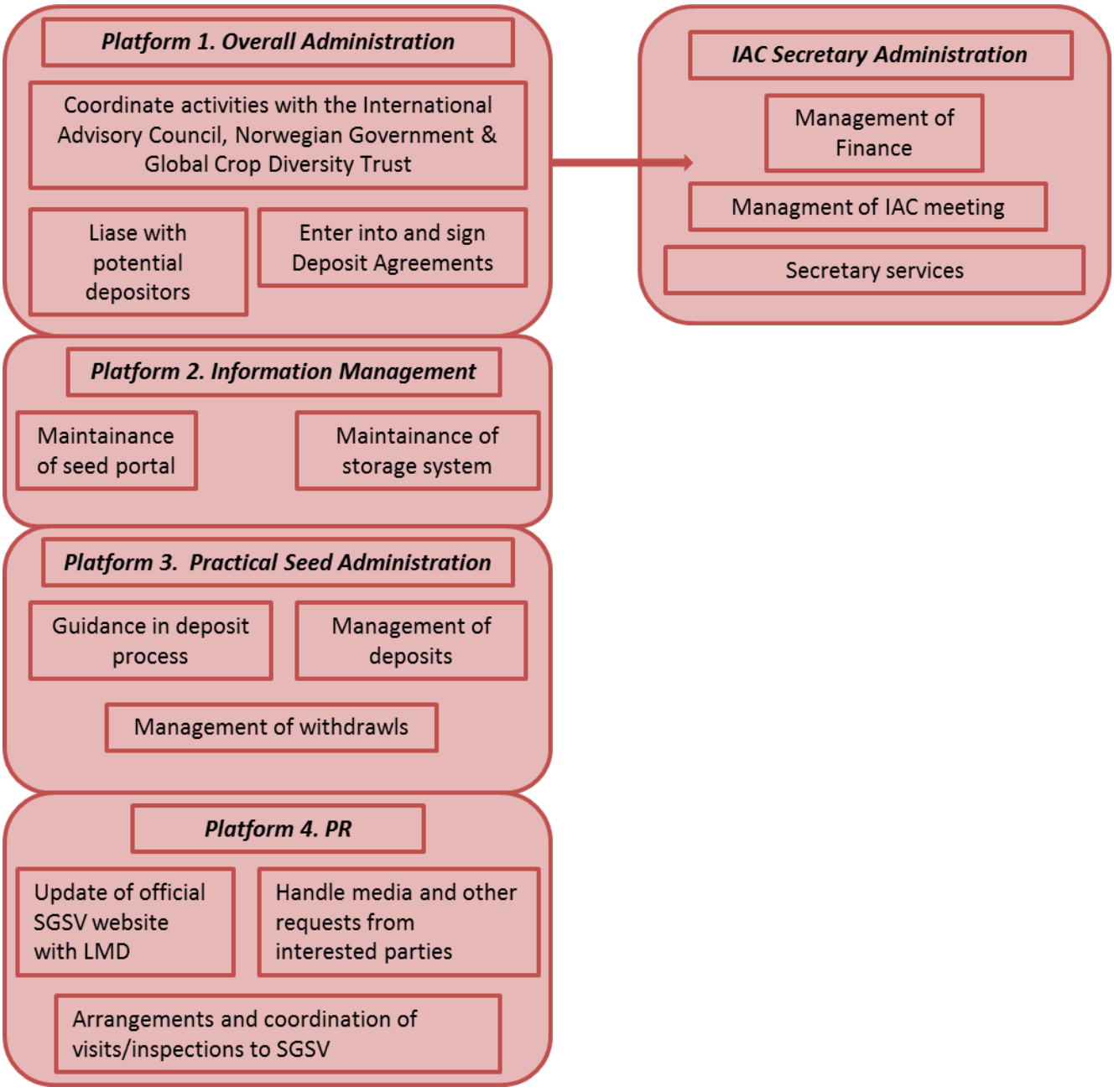

Figure 2. NordGen's organisation chart for the management and operation of SGSV.

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, LMD, the Trust, Statsbygg, The Governor of Svalbard, and Depositors. This platform also includes the provision of secretariat services for the International Advisory Council (hereafter referred to as IAC) in accordance with the Three Party Agreement.

The financial administration covers annual financial statements to be presented to the Trust and 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, see annex 3 for details. 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.

By the end of 2012 NordGen had accepted deposits from 53 deposit institutes. Annex 2 provides a list of the deposit institutes and the number of samples in their respective deposits. Twelve of the depositors are International Agricultural Research Institutes (hereafter referred to as IARCs), 23 depositors are located in developing countries (not members of OECD) and 17 are located in OECD countries. The largest share of the current holdings in the SGSV (Figure 3) is deposited by IARC's represented by several institutes belonging to the Consultative Group of International Agricultural Research Centres (hereafter referred to as CGIAR), the Asian Vegetable Research Centre (AVRDC) and the Tropical Agricultural Research and Higher Education Centre (CATIE), all hold collections of PGRFA in trust for the UN Food and Agriculture Organisation (FAO). Figure 3 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. Nine new Institutes from Mongolia, Azerbaijan, Chile, Portugal, Burundi, Mali, Georgia, Philippines and Armenia joined the project by signing the Standard Depositor Agreement during 2012, see Annex 1 for further information.

The composition of the current depositors is the result of 1) targeted invitations; 2) an open invitation policy, and; 3) the Global Crop Diversity Trust's strategy to target the most genetically unique and diverse collections of unique PGRFA for funding and technical support. The IARC collection holders have been given specific follow-up to ensure that the FAO in-trust collections form the core of the SGSV collection. The public interface of the Seed Vault on the internet welcomes all genebanks willing to meet the terms and conditions of the Standard Deposit Agreement to deposit. The open invitation policy has led to a number of unsolicited proposals for depositing.

Between 2010 and 2012 we have 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 storage site for a sustainable global system for ex-situ conservation in the framework of the ITPGRFA and the GPA. The Trust's Global System project explicitly addresses the call for a rational global *ex-situ*

conservation system by supporting regeneration of threatened accessions of more than 75,000 accessions in 86 institutes in 77 countries globally, and safety back-up in the Seed Vault. Some of these project partners have signed the SDA and deposited safety back-up samples directly; in other case the project partners have deposited in an IARC and following multiplication the IARC has deposited or will deposit safety duplicates in the Seed Vault. In addition to the project partners in this specific project, the Trust is supporting shipments of safety deposits to the Seed Vault from other eligible collections worldwide and about 75% of the samples currently stored in the Seed Vault have been prepared and shipped to the Seed Vault with financial, technical and logistical support from the Trust. NordGen's project coordinator participated in the Global System symposium organized in Rome in April 2012 by the Global Crop Diversity Trust. This provided an opportunity to communicate with current and potential future depositors about administrative, legal and practical aspects of the project.

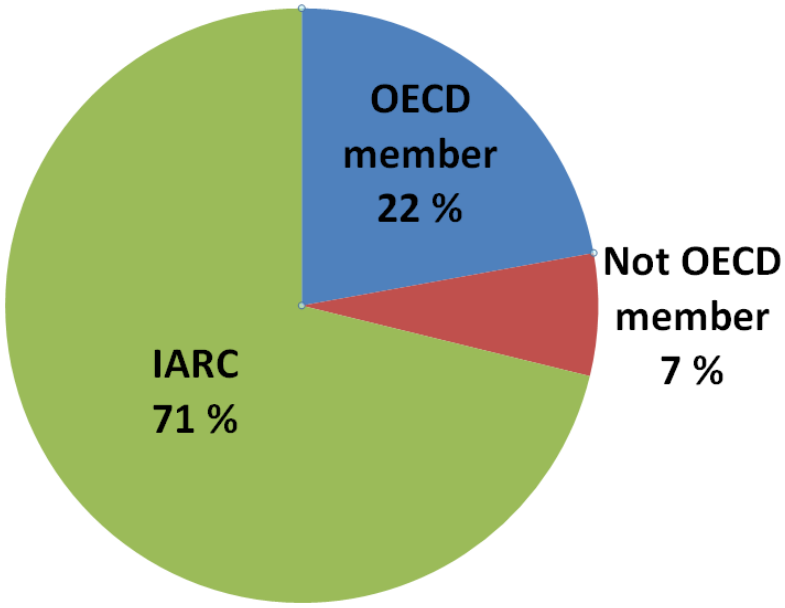

Figure 3. Holdings in SGSV in share of seed samples according to geographic mandate of the depositor institute. Number of institutes in each category in parenthesis.

Revision of Standard Deposit Agreement

Based on advice from the International Advisory Council, the LMD started to revise article 7 of the Standard Deposit Agreement in early 2012. LMD decided to reorganise the structure to improve clarity and simplicity in order to make the Agreement more accessible.

The Ministry presented a draft revision of the Standard Deposit Agreement in August 2012 to NordGen and the Chair of the IAC. The parties have worked closely since August 2012 by email and meetings and a new SDA was adopted in early 2013.

Meetings of the international Advisory Council

The International Advisory Board decided to postpone the scheduled meeting in August 2012 due to overlap in time and membership with a Working Group of the FAO Commission on Genetic Resources held at Svalbard. It was decided that the next IAC meeting should take place in February 2013, in Svalbard, in conjunction with the 5th anniversary celebrations of the Seed Vault. The postponement of the IAC meeting is reflected in the spending (Annex 3).

The composition of the IAC changed in 2012. Some members retired from their positions in the organizations they represented. Three new members were appointed: One new member was appointed by the Director General of the Food and Agriculture Organization of the United Nations: Ms. Linda Collette, Secretary of the Commission for Genetic Resources. The Norwegian Government appointed two members to represent the large depositors: Mr. Ruaraidh Sackville Hamilton, Genebank Manager at the International Rice Research Institute (IRRI), and Mr. Bert Visser, Director of Centre for Genetic Resources (CGN), the Netherlands.

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 (http://www.regjeringen.no/en/dep/lmd/campain/svalbard-global-seed-vault.html), as well as the website of the Trust (http://www.croptrust.org). 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.

Depositors report a minimum set of descriptors necessary for unique identification of the samples. Information for depositors is provided on the "guidelines for depositors page" of www.nordgen.org/sgsv. The data is publicly available and searchable on the Information Sharing page of www.nordgen.org/sgsv

The data portal is developed and updated regularly, including the guidelines for depositing seeds in the SGSV. The database is updated directly following every seed deposit event. 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 backed-up 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.

The data portal is an important tool in NordGen's interaction with partners, especially the 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.

Data from the SGSV data portal 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. In 2012 SINGER became part of the new GENESYS –Gateway to genetic resources database: http://www.genesys-pgr.org/

Figure 4. The public interface of the Seed Vault data portal.

Platform 3: Practical Seed Administration

Overall management of transport logistics and hence exit arrangements for seeds deposited is managed by NordGen. The practical seed administration further covers assistance regarding security, customs, phytosanitary certificates and other relevant clearances. NordGen communicates closely with depositors on all practical aspects of making shipments. The depositors are instructed to make the shipment with a regular courier such as DHL, TNT etc. from their genebank to Oslo. In the many cases where the shipment cost is covered by the Global Crop Diversity Trust, NordGen and Trust staff work in close collaboration to ensure proper packaging, etc. To avoid problems with the bottleneck between the mainland and Svalbard, NordGen organizes transport from Oslo to Longyearbyen together with the logistics company Jetpak. NordGen renegotiates and enters into contracts with Jetpak on an annual basis.

Logistics at Svalbard is coordinated by NordGen and handled in close collaboration with the local logistics company, Pole Position. Screening and security at arrival in Svalbard is handled in collaboration with the airport management at Longyearbyen airport and the security company, Securitas. Statsbygg provides support with logistics and technical backstopping during deposit openings at Svalbard. Overall security during transport between the airport and the Seed Vault is provided by the police department at the Governor's office. NordGen receives, registers and stores seed boxes inside the Seed Vault.

Nordgen is currently establishing a new Quality Assurance (QA) system and the procedures for management of SDAs, organization of deposit logistics, data handling and practical on-situ logistics and security is streamlined and formalized in Working Instructions under the new QA regime.

NordGen has organized between three and six deposit openings per year since the opening in 2008. Depositors are asked to organize shipments for arrival in Oslo during seven days windows. Starting in 2012, NordGen established a routine for three deposit openings per year, which NordGen consider sufficient for the current level of deposits per year. NordGen organized three openings in 2012; In March, in April and October.

By the end of 2012, 774,601 safety deposit samples from 53 different genebanks were stored in the Seed Vault. See figure 5, table 1 and annex 2 for further information

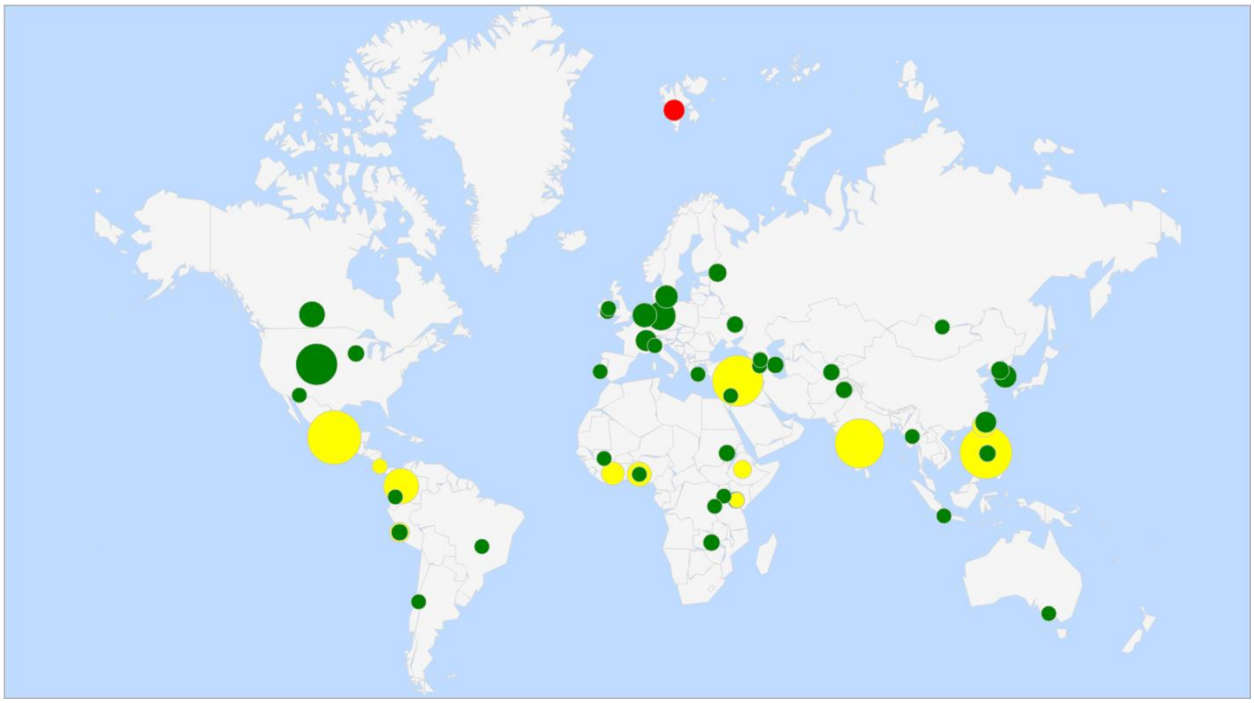

Figure 5. Genebanks with safety deposits in the Svalbard Global Seed Vault. The radius of the circles is relative to the number of samples deposited, and the circle size reflects the size of the deposits according to 25 size classes. Yellow circles are International Agricultural Research Centres and green circles are regional, national or subnational genebanks. The radius of the red SGSV circle is not relative to the holdings.

Storage Capacity Assessment

NordGen reported in its 2011 annual report that storage hall 2 in the Seed vault was filling up quite rapidly because of the high number of boxes arriving and a trend of less seed samples per box. NordGen therefore reported that "NordGen, in consultation with partners and depositors will do further analyses of the storage capacity in 2012 and consider the eventual need for cooling of an additional chamber."

In conclusion, NordGen considers it unlikely that a new hall will be necessary before 2017 based on the following information:
The total storage capacity with the current shelving is 2880 boxes. The current holding in the Seed vault is 2161 boxes. Chamber 2 is therefore 75% full with the current shelving. It is possible to mount 288 more slots by re-installing the sections that were removed in 2009 (8x36 slots). See figure 6 for a graphical illustration. In 2012 we received 197 new boxes. This is the lowest number of boxes received in one year so far. See figure 6.

Some of the depositors have indicated plans for further shipments in their Standard Deposit Agreement Annex 1 and some have reported to NordGen through direct communication that they intend to ship seeds in the coming years. The number of boxes expected based on SDA information is about 160 (estimate based on 400 samples in one box). The total number of boxes reported for shipment in 2013 is about 40. This low number of expected shipments reflects the fact that many of the large depositors have already deposited the bulk of their material and will in the coming year only ship smaller consignments with freshly regenerated material. Deposit Agreements are signed with some potentially large depositors such as EMBRAPA in Brazil and NBPGR in India, but it is too early to say if they will ship large amounts.

We are therefore at a stage in the project where it is hard to predict the number of boxes to expect in the coming years, but based on the current information we have capacity for 521 more boxes even without increasing the capacity in Vault 2. NordGen consider 200 boxes a high estimate for the number of boxes to expect annually in the coming years and we predict that the <1000 slots that will be available with increased capacity is sufficient for at least the five year period: 2013-2017.

The risk factors with this estimate are: 1) We do not know how much current and future depositors want to deposit in the next years (NordGen have requested such information from depositors, but the information is not complete) 2) We do not know how future deposits will be packaged. NordGen have experienced that the smaller depositors are sending boxes with less samples per box, thus requiring more storage space per seed sample. We do not know how many new depositors will want to join the project in the coming years and we do not know how compact they will be able to package.
NordGen will continue to report on the development on this issue in its annual report. Furthermore, NordGen will inform the Ministry and Statsbygg about significant new developments that will impact the estimate presented here.

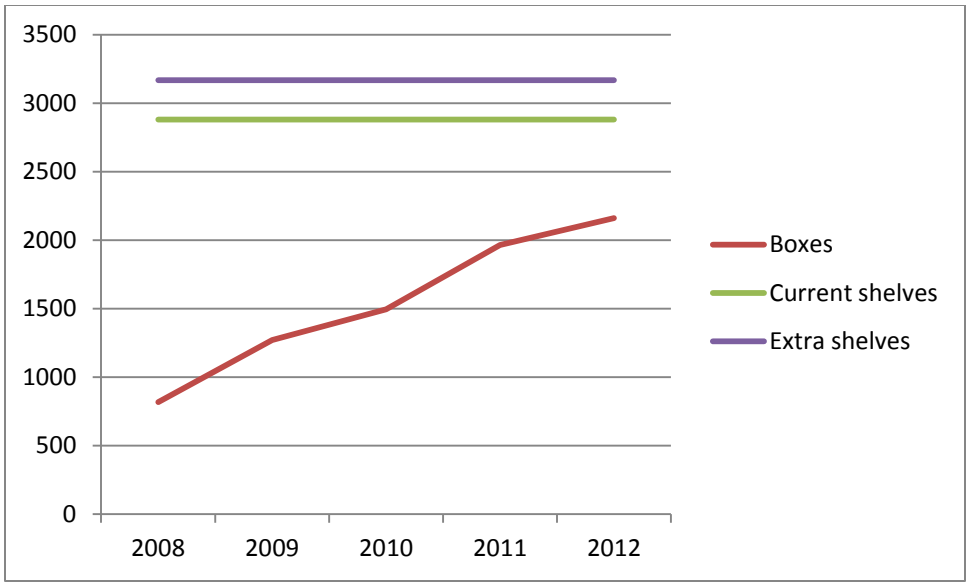

Figure 6. Total number of boxes vs. capacity 2008-2012.

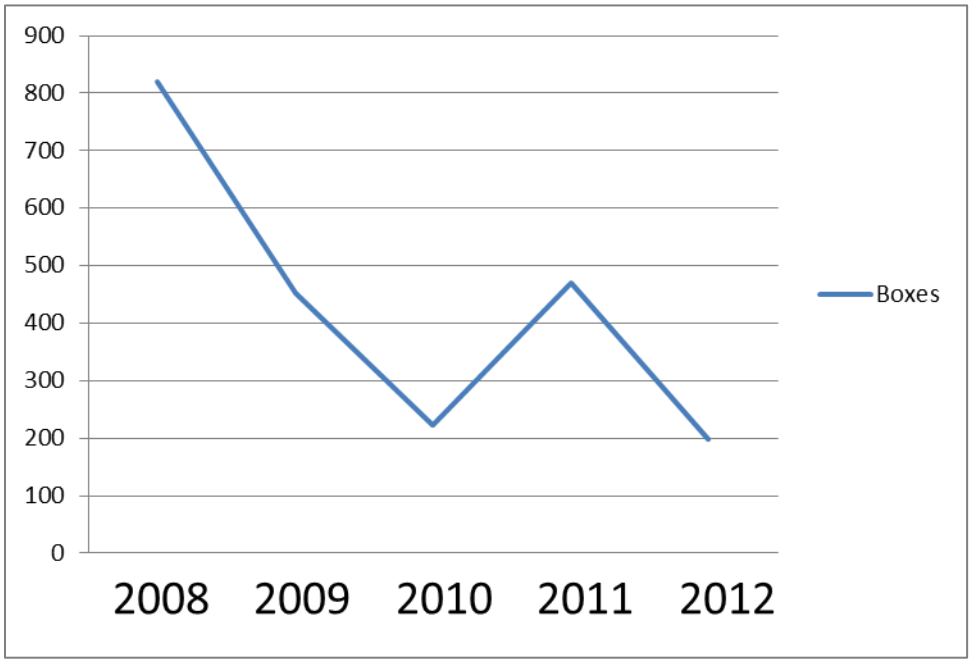

Figure 7. Number of boxes arriving every year 2008-2012.

Table 1. Deposit openings in 2012

Deposit opening	Institute code	Institute acronym	Taxa	Accessions	Seed boxes
March 2012	ARM035	LPGPB	22	175	1
	COL003	CIAT	232	1366	3
	CRI001	CATIE	24	202	1
	SYR002	ICARDA	135	8567	32
	TJK027	NRCGR	2	1646	4
	USA974	SSE	23	213	1
	USA996	NPGS	166	12801	25
April 2012	AZE015	AGRI	194	1522	7
	COL003	CIAT	16	2334	9
	CRI001	CATIE	8	72	1
	PER002	UNALM	1	245	3
	PRT005	INRB	1	12	1
	ZMB030	SPGRC	8	1463	8
October 2012	BDI003	ISABU	2	365	3
	BRA008	EMBRAPA	2	805	6
	CHL002	INIA	1	43	1
	COL003	CIAT	115	650	2
	CRI001	CATIE	14	200	1
	GEO028	AUG	2	120	1
	IND002	ICRISAT	11	11200	36
	MLI002	IER	2	158	1
	MNG030	PSARTI	65	160	1
	NGA010	NACGRAB	3	399	2
	NGA057	IITA	26	3045	9
	PAK001	PGRI-NARC	6	1277	1
	PER002	UNALM	1	264	2
	PHL001	IRRI	16	3861	7
	PHL129	NPGRL	8	1754	7
	RUS001	VIR	155	1094	7
	TWN001	AVRDC	71	1742	4
	UKR001	UAAS	1	263	2
	USA971	DELEP	40	60	1
Total 2012			1373	58078	190

In 2012, 58,028 new seed samples from 27 depositors were stored in the Seed Vault. This increased holdings by 8% and the total holding by the end of the year was 774,601 samples. The statistics from the data base (figure 8) shows that wheat and rice are still the crops best represented in terms of number of samples in the Seed Vault. Based on the data on holdings by the end of 2012 NordGen prepared an analysis of the current status of seed deposits in relation to the global *ex-situ* collections of PGRFA. The objective was to assess the existing global *ex-situ* genepool with a view to identify gaps in the current safety back-up collection in the Seed Vault. The outcome of this assessment was presented to the IAC in their meeting in February 2013.

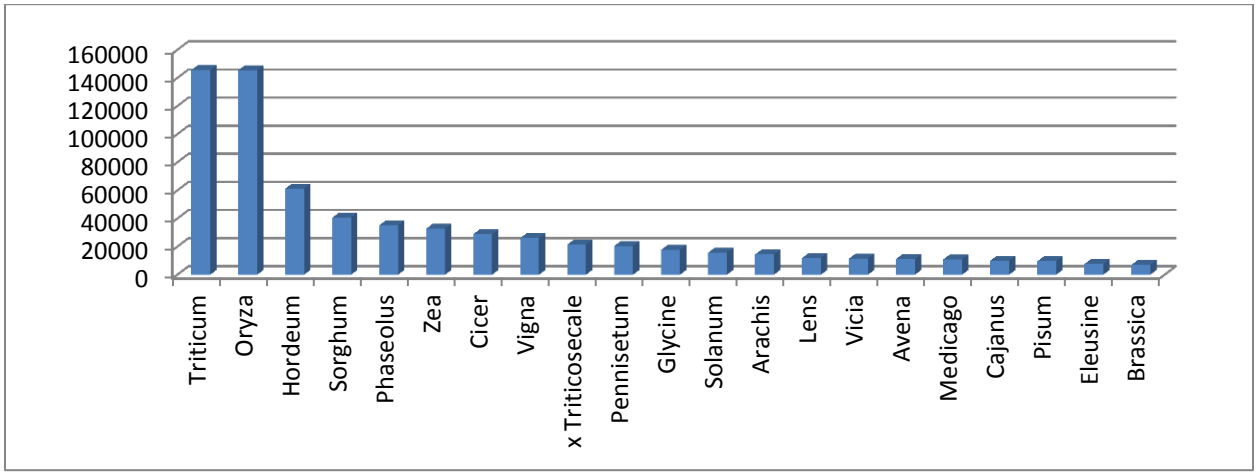

Figure 8. Statistics of holdings for genera represented by more than 5000 samples by the end of 2012.

Platform 4: Public Relations

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

In this section we report on NordGen's PR work. In addition to NordGen both LMD and the Trust do active PR-work in connection with the Seed Vault project.

There is still an increase of requests for visits, interviews, lectures or of answering particular questions connected to SGSV or more general comments of conservation and utilization of genetic resources. In 2012 119 inquiries from 29 countries from all over the world were obtained. Most requests came from Norway (27), United States of America (19), United Kingdom (13), Germany (10) and Sweden (10). 89 requests dealt with the possibility to visit SGSV – for various reasons. The majority, 62 requests, came from different media. Altogether only 14 visitors (groups or individuals) were allowed to visit SGSV in 2012. This resulted in some media exposures of SGSV 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. In February 2012 two film teams visited the Vault for two productions. One was released in the fall 2012, and the other one, "The back-up Copy" will be released in the spring of 2013. Due to the focus on external media-productions NordGen did not invest in production and provision, editing and multiplication of film in 2012 and this is reflected in the spending (Annex 3).

The interest for interviews and particular questions regarding plant genetic resources (PGR) in general and SGSV in particular increases. There seems also to be an increasing interest for lectures around PGR and SGSV. 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 SGSV.

After the release of the Security report (see above) containing a number of recommendations to improve the security in the Vault the local fire authorities took a decision of closing the Vault for all unauthorized visits until acceptable security arrangements had been fulfilled. It meant that no external visits were allowed from March until the end of the years. During the summer and fall Statsbygg worked hard to find solutions for the security requirements so that the Vault again can be accessible for a restricted and selected number of visitors. (In early March 2013 the ban on visits was lifted). The aim is still to have the Vault accessible for visits 4-6 times per year at those occasions when NordGen staff or representatives for the Trust or LMD are present on Svalbard. The collaboration with the local office of Statsbygg, responsible for monitoring and daily operation of SGSV, is very satisfactory.

Figure 9. Shooting of the film "The back-up Copy" during spring 2012. The film was released in February 2013.

Annex 1. Standard Depositor Agreements in chronologic order

NordGen - Sweden
WARDA - Republic of Benin
CIAT - Republic of Colombia
CIMMYT - United Mexican States
CIP - La Molina, Republic of Peru
ICARDA - Syrian Arab Republic
ICRISAT - Republic of India
IITA - Federal Republic of Nigeria
ILRI - Federal Democratic Republic of Ethiopia
IRRI, Manila - Republic of the Philippines
ICRAF, Nairobi - Republic of Kenya
AVRDC - Taiwan
CGN - Netherlands
Goldman, Seed Savers - United States of America
NARC - Islamic Republic of Pakistan
IPK - Federal Republic of Germany
KARI - Republic of Kenya
ITCC/RDA - Republic of Korea
Institute of Agriculture - Republic of Macedonia
Embrapa - Federative Republic of Brazil
Vavilov Institute - Russian Federation
Agroscope Changins - Swiss Confederation
Departement of Agriculture, Fisheries and Food - Republic of Ireland
Teagasc, Crop Research Centre, Carlow - Republic of Ireland
The National Bureau of Plant Genetic Resources - Republic of India
National Centre for Plant Genetic Resources - Ukraine
Taiwan Agriculture Research Institute - Taiwan
Canadian Genetic Resource Program, Saskatoon - Canada
I Lomouri Research Institute of Farming - Georgia
Pyongyang Crop Genetic Resources Institute - Democratic People's Republic of Korea
Ugandan Plant Genetic Resources Centre - Republic of Uganda
Univeridad Nacional Agraria, La Molina - Republic of Peru
Institute for Cereal Crops Improvement, Tel Aviv University - State of Israel
Arizona Board of Regents Univerisity of Arizona - United States of America
Centro Agronomico Tropical CATIE - Republic of Costa Rica
PGR Unit Agricultural Research Corporation - Sudan
SPGRC Plant Genteic Resource Centre - Republic of Zambia
ICABIOGRAD - Republic of Indonesia
Australian Temperate Field Crops Collection - Commonwealth of Australia
NAGREF, National Agricultural Research Foundation - Hellenic Republic
Biotechnology, Plant Genetic Resources - Republic of the Union of Myanmar
INIAP - Republic of Ecuador
PGRC BARI - People's Republic of Bangladesh
Lombardy Seedbank - Republic of Italy
NACGRAB National Centre for Genetic Resources and Biotechnology - Federal Republic of Nigeria
National Republican Center of Genetic Resources - Republic of Tajikistan
Plant Science Agricultural Research Institute –Mongolia*
Genetic Resources Institute (AGRI) of the Azerbaijan National Academy of Sciences –Azerbaijan*
Unidad de Recursos Genéticos -INIA La Platina – Chile*

Instituto Nacional de Recursos Biológicos – Portugal*
Agricultural Research Institute of Burundi (ISABU) – Burundi*
Institute of rural economy – Mali*
Georgia State Agrarian University –Georgia*
National Plant Genetic Resources Laboratory – Philippines*
Armenian State Agrarian University, Laboratory of Plant Gene Pool and Breeding –Armenia*

* Signed standard depositor agreement during 2012.

Annex 2. Depositor holdings by the end of 2012

Institute	SDA signed	Acronym	WIEWS	Country	Accessions Dec 2012
Armenian State Agrarian University, Laboratory of Plant Gene Pool and Breeding	YES	ASAU	ARM035	Armenia	175
Australian Genebank Grains	YES	AGB	AUS039	Australia	343
Genetic Resources Institute (AGRI) of the Azerbaijan National Academy of Sciences	YES	AGRI	AZE15	Azerbaijan	1522
Agricultural Research Institute of Burundi (ISABU)	YES	ISABU	BDI003	Burundi	365
EMBRAPA	YES	EMBRAPA	BRA008	Brazil	805
Plant Gene Resources of CanadaCanadian Genetic Resources Program, Saskatoon Research Centre	YES	PGRC	CAN004	Canada	20985
Station Federale de Recherches en Production Vegetale de Changins	YES	RAC	CHE001	Switzerland	9665
Unidad de Recursos Genéticos -INIA La Platina	YES	INIA La Platina	CHL002	Chile	43
Leibniz Institute of Plant Genetics and Crop Plant Research	YES	IPK	DEU146	Germany	29961
Instituto Nacional Autónomo de Investigaciónes Agropecuarias	YES	INIAP	ECU076	Ecuador	168
I. Lomouri Research Institute of Farming.	YES	ILRF	GEO001	Georgia	305
Georgia State Agrarian University	YES	AUG	GEO028	Georgia	120
National Agricultural Research Organization	YES	NAGREF	GRC035	Greece	25
Indonesian center for agricultural biotechnology and genetic resources	YES	ICABIOGRAD	IDN179	Indonesia	1050
Oak Park Research Centre	YES	AFT	IRL001	Ireland	577
Department of Agriculture, Food and Rural Development	YES	DAFF	IRL029	Ireland	100
Institute of Cereal Crop Improvement, Tel Aviv University	YES	ICCI	ISR003	Israel	900
University of Pavia, Department of Earth and Environmental Sciences, Lombardy seed bank	YES	LS	ITA411	Italy	2
National Genebank of	YES	NGBK	KEN015	Kenya	1314

Kenya					
National Agrobiodiversity Center	YES	NAC	KOR043	South Korea	13185
Institute of rural economy	YES	IER	MLI002	Mali	158
Department of Agricultural Research	YES	DAR (MOAI)	MMR003	Myanmar	718
Plant Science Agricultural Research Institute	YES	PSARTI	MNG030	Mongolia	160
National Centre for Genetic Resources and Biotechnology (NACGRAB)	YES	NACGRAB	NGA010	Nigeria	800
Centre for Genetic Resources	YES	CGN	NLD037	Netherlands	18212
Plant Genetic Resources Institute, National Agricultural Research Centre	YES	PGRI-NARC	PAK001	Pakistan	2874
Programma de Mais	YES	La Molina	PER002	Peru	1296
National Plant Genetic Resources Laboratory	YES	NPGRL	PHL129	Philippines	2254
Pyongyang AAS	YES	AAS	PRK013	North Korea	5700
Instituto Nacional de Recursos Biológicos	YES	INRB	PRT005	Portugal	12
N.I. Vavilov All-Russian Scientific Research Institute of Plant Industry	YES	VIR	RUS001	Russia	5278
Agricultural Research Corporation	YES	ARC	SUD034	Sudan	1195
Nordic Genetic Resource Center	YES	NORDGEN	SWE054	Regional, Sweden	14397
Republican National Genetic Resource Center	YES	RNGRC	TJK027	Tajikistan	1646
Taiwan Agricultural Research Institute	YES	TARI	TWN006	Taiwan	10503
National Agricultural Research Organization	YES	NARO	UGA031	Uganda	777
Institute of Plant Production n.a. V.Y. Yurjev of UAAS	YES	UAAS	UKR001	Ukraine	2782
Desert Legume Program. University of Arizona	YES	DELEP	USA971	USA	134
Seed Savers Exchange	YES	SSE	USA974	USA	1873
National Center for Genetic Resources Preservation	NO	NPGS	USA996	USA	69307
SADC Plant Genetic Resources Centre	YES	SPGRC	ZMB030	Regional, Zambia	1463
Plant Genetic Resource Centre, Bangladesh Agricultural Research Institute	YES	BARI	BGD164	Bangladesh	0
Institut de Recherche Agronomique de Guinée	YES	IRAG	GIN020	Guinea	0
National Burea	YES	NCPGR	IND001	India	0
Institute of Agriculture	YES	IAS	MKDxxx	Macedonia	0

Skopje					
IARCs					
Africa Rice Center	YES	WARDA	CIV039	International, Benin	12439
Centro Internacional de Agricultura Tropical	YES	CIAT	COL003	International, Columbia	45898
CATIE	YES	CATIE	CRI001	International, Costa Rica	723
International Livestock Research Institute	YES	ILRI	ETH013	International, Ethiopia	5336
International Crop Research Institute for the Semi-Arid Tropics	YES	ICRISAT	IND002	International, India	99803
World Agroforestry Centre	YES	ICRAF	KEN023	International, Kenya	777
Centro Internacional de Mejoramiento de Maiz y Trigo	YES	CIMMYT	MEX002	International, Mexico	123057
International Institute of Tropical Agriculture	YES	IITA	NGA057	International, Nigeria	16476
Centro Internacional de la Papa	YES	CIP	PER001	International, Peru	6825
International Rice Research Institute	YES	IRRI	PHL001	International, Philippines	116668
International Centre for Agricultural Research in Dry Areas	YES	ICARDA	SYR002	International, Syria	110681
The World Vegetable Center	YES	AVRDC	TWN001	International, Taiwan	12769
TOTAL			**53**		**774601**

Annex 3. Budget and Spendings 2012

Activity	*Cost Category*	*Items*	*Cost basis*		*Budget 2012*	*Actual spending*
			SEK	*Qty*	*SEK*	*SEK*
709512: Coordinator	Personnel [a]	Coordinator	94 000	6	564 000	544 153
	Travel [b]	To Svalbard and other destinations	15 000	6	90 000	57 757
	Communication / supplies	Phone, computer,printer, mailing etc.	30 000	1	30 000	23 552
Sub-total					**684 000**	**625 462**
709513: Platform 1 - Overall Administration	Personnel	Director and Finance Director	160 000	1	160 000	192 630
	Communication / supplies	Phone, printer, mailing etc.	10 000	1	10 000	30 143
	Travel [c]	To Svalbard and other destinations		4	40 000	21 504
Sub-total					**210 000**	**244 277**
709514: Platform 2 - Information Management	Personnel [a]	IT-manager	94 000	1,8	169 200	175 668
	Travel [b]	To Svalbard	15 000	2	30 000	7 090
	IT System	Server, web	48 000	1	48 000	48 000
Sub-total					**247 200**	**230 758**
709515: Platform 3 - Practical Seed Administration	Personnel [a]	Seed Technician	94 000	0,8	75 200	75 693
	Travel [b]	To Svalbard	15 000	1	15 000	33 888
		Vehicle hire, local supplies	30 000	1	30 000	14 557
Sub-total					**120 200**	**124 138**
709516: Platform 4 - PR	Personnel [a]	Scientific information expert	135 000	3,6	486 000	499 883
	Personnel [a]	Other staff	94 000	0,25	23 500	
	Travel [b]	To Svalbard and other destinations	15 000	7,5	112 500	115 618
	Materials for media	External filming, editing and multiplication	50 000	1	50 000	
	Communication / supplies	Phone, printer, mailing etc.	25 000	1	25 000	25 260
Sub-total					**697 000**	**640 761**
709517: International Advisory Council	Personnel	Director	160 000	0,5	80 000	22 507
	Personnel [a]	Other staff	94 000	0,5	47 000	52 001
	Travel [b]	Meeting at Svalbard	15 000	12	180 000	18 441
	Communication/Supplies	Communication (phone, printer, mailing etc.)	10 000	1	10 000	5 000
	Expenditure	Meeting costs	35 000	1	35 000	
Sub-total					**352 000**	**97 949**
709519: Pilot Project - Longterm storage		Testing, Testing Materials, Procedures	100 000	1	100 000	59 981
Sub-total					**100 000**	**59 981**
Total costs 2012 SEK					**2 410 400**	**2 023 326**
Result 2012 SEK						**387 074**
TOTAL SEK					**2 410 400**	**2 023 326**
TOTAL US$ [d]					**$386 282**	**$324 251**
WORKINGCAPITAL FUND SEK per 2012-12-31						**1 121 147**
WORKINGCAPITAL FUND US$ per 2012-12-31 [d]						**$179 671**

[a] NordGen Personnel costed at avg SEK 94,000/month and scientific information expert SEK 135,000/month.

[b] Travel costed at SEK 15,000/trip

[c] Travel costed at 2*SEK 15,000/trip to Svalbard and 2*SEK 5,000/trip to Oslo

[d] Based on exchange rate at 15 April 2011: 1 US Dollar = 6,24 SEK

Income 2012: $135 003 Global Crop Diversity Trust, SEK 1.519.200 LMD, SEK 80.000 NordGen.