

**United Nations Development Programme (UNDP)**

**Democratic People´s Republic of Korea (DPRK)**

DDemo

**Project Evaluation**

**“Improved Seed Production for Sustainable Agriculture”**

**and**

**“Reduction of Post-Harvest Losses for Food Security”**

**April 2014**

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# Acknowledgements

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# Executive Summary

The United Nations Development Programme (UNDP) in Pyongyang commissioned in late March 2014 the evaluation of two agriculture sector projects that are since 2011 being implemented in the Democratic Peoples´ Republic of Korea (DPRK). Both of these projects are financed through UNDP core funding and both are being executed by the Food and Agriculture Organization of the United Nations (FAO).

This evaluation report contains in four sections background information, details of the evaluation methodology, evaluation findings regarding relevance, effectiveness, efficiency, impact, sustainability and management, as well as lessons learned, conclusions and recommendations.

The “Improved Seed Production for Sustainable Agriculture” project aims to strengthen food security in DPRK through support for quality seed multiplication, while the second project “Reduction of Post-Harvest Losses for Food Security” intends to importantly reduce food losses by introducing better post harvest management techniques and technologies.

The evaluation is intended to do a stocktaking of the projects, to assess the so far achieved progress towards realizing the stated outputs and to analyze, in close consultation with all the concerned stakeholders, the effectiveness of the interventions. Based on this analysis, the evaluation is expected to provide the DPRK Government, the resource partner (UNDP), and the executing partner (FAO) with recommendations regarding options on project extension and/or substantive revisions for ensuring sustainable development, including any need for additional assistance and activities of the project prior to its completion.

Conducted in line with UNDP guidelines, the evaluation combined context, outcome and process evaluation tools to provide rich and practical information. The following techniques and approaches were used for the gathering, verification and analysis of the evaluation data:

* a thorough review of all available documents, including annual and semi-annual project reports, minutes from Project Board meetings, work plans, project documents, mission reports, implementing partner agreements, and other materials related to project activities,
* individual semi-structured interviews with a total of 16 key stakeholder representatives from the DPRK Ministry of Agriculture (MoA), the National Coordinating Committee (NCC) under the Ministry of Foreign Affairs, FAO and UNDP,
* direct observations during visits to six UNDP selected project sites, including two of the three beneficiary seed cooperative farms under the “Improved Seed Production for Sustainable Agriculture” project and four out of totally six farms directly benefitting from the “Reduction of Post-Harvest Losses for Food Security” project,
* Focus group discussions with beneficiary representatives at the visited Maekjon and Unpa seed farms as well as Pyongam, Pyongam, Soho and Jangsuwon cooperative farms.

The evaluation is limited to the assessment of the projects´ performance during the period from March 2011 (project start) to March/April 2014, including project objectives, inputs, activities and the extent to which anticipated outputs were produced. Since the projects´ implementation period has been extended until 31 October 2014 numerous particularly important activities are yet to be carried out during that time. Outputs achieved at this point are therefore only partial. Another limiting factor for the evaluation was the availability of sufficiently detailed, reliable and independently verifiable data, including production and productivity related statistics.

Evaluation findings show that both projects progressed in general satisfactorily towards the delivery of the planned outputs despite the recorded delays during start-up and parts of 2013, when financial transaction problems caused certain activities to be put temporarily on hold. It is expected that the interventions will contribute to improvements in two key areas influencing food security within DPRK, provided critically important challenges are addressed during the rest of the implementation period,.

The “Improved Seed Production for Sustainable Agriculture” project concentrated its support to the seed sector in DPRK via farms that produce seed of both, staple food and vegetable crops. Project outputs are a combination of capacity building efforts and the introduction of improved equipments, which are expected to result in quantitative as well as qualitative advances in the seed production. The delivery of outputs is ongoing. Full project benefits will therefore only be realized during the current season.

The so far achieved, preliminary average increase in seed production has been estimated at 20-25%. Preliminary MoA records of qualitative improvements indicate that the percentage of seed passing international quality standards increased from 13 to 20%.

Another way of increasing the amount of available food lies in the reduction of production losses. In DPRK current post harvest losses (PHL) are high, which therefore offers potential for rapid gains.

The success of the Post Harvest initiative by project end depends on the extent to which post harvest losses are reduced, but even more importantly, on how well it will have demonstrated the most cost-effective methods of reducing these losses. Thanks to the establishment of comprehensive baseline data, the project will during the upcoming 2014 cropping season be having a first-time opportunity to clearly and accurately measure the achieved post harvest loss reductions for each step in the harvesting process of every crop on all six demonstration farms. The stated aim is an overall reduction of losses by some 50% from the recorded pre-intervention total loss levels of 15.56% in rice, 16.65% in maize and 16.35% in wheat and barley. Improved infrastructures and equipments, including threshing yards, threshers, harvesters and two complete rice milling plants supplied through the project, are expected to play a particularly important role for reaching those goals. Based on preliminary figures recorded at one of the six demonstration farms, the envisaged 50% reduction of post-harvest losses to around 7.5% seems feasible.

A total of 6,804 cooperative farmers are expected to directly benefit from the achieved results under the Post Harvest project. Primary cooperative farmer beneficiaries on the seed farms number 3,612.

Challenges are mainly related to the projects’ capacity to generate the necessary data for measuring detailed progress towards lower post-harvest losses as well as increased availability and use of improved seed. This area requires significant additional attention, along with the need to urgently update the sustainability strategy. Operational recommendations for the remaining implementation period therefore include a proposal to boost the projects´ ability to carefully measure and document field results in order to ensure that firm statements with regard to the viability of the piloted technologies and management practices, as well as their suitability in different environments, can be made prior to the project end. A very intense collaboration with the MoA, PAC, the county authorities and management teams of beneficiary cooperative farms will be essential in the process.

Another, in parallel implemented, UNDP/FAO “Strengthening Capacity for the Improvement of Food and Agriculture Information System (Agricultural Databank)” initiative was supposed to strengthen the availability of baseline information and specifically assess / monitor post harvest losses on the demonstration and neighboring farms. The early closure of this Agricultural Databank initiative in 2013 had a negative effect on the other projects´ capacity to access such key data. In view of this and given the intensity of additionally required PHL assessment efforts ahead, it is recommended that the Project Board considers re-allocating some of the remaining budgetary resources for temporary external project support by a qualified technical specialist.

The evaluation also recommends further, well-targeted investments for the development of the seed sector and the reduction of post-harvest losses in DPRK. They should closely build on the experiences gained, seek to consolidate achievements and focus particularly on the up-scaling of proven results from the current demonstration cooperatives.

One particular focus in future seed sector programming would need to be on further seed quality improvements to fully reach international quality standards. It is recommended that potential future project phases or projects in support of the seed sector furthermore consider including the testing of high-cold-tolerant winter wheat varieties (such as those grown under similar conditions in China), as they could help revitalize the country´s double cropping programme. Other double cropping system related benefits could potentially be obtained through the introduction of short duration, photo insensitive and cold tolerant hybrid varieties of maize, which could be used in combination with wheat and barley. Programming support to strengthen breeder seed production and to make reasonable priced hybrid rice and hybrid vegetable seed of superior cultivars available in larger quantities are seen as additional priorities.

In supporting further post-harvest related programming additional benefits are for example possible through an even wider use of threshing -cum- seed drying floors, combined harvesters, mobile threshers, maize shellers and improved crop storage, whereby the sustainability of the adoption of technological innovations is primarily dependent upon their profitability in the local setting.

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# List of Abbreviations and Acronyms

AAS Academy of Agricultural Sciences

APR Annual Project Report

APSA Asia Pacific Seed Association

AREP Agricultural Recovery and Environmental Protection Programme

BTOR Back To Office Report

CFMS County Farm Machinery Stations

CFSAM Crop and Food Security Assessment Mission

CGIAR Consultative Group on International Agricultural Research

CTA Chief Technical Advisor

EU European Union

FAO Food and Agriculture Organization of the United Nations

HHFS Household Food Security

IC International Consultant

M&E Monitoring and Evaluation

MDG Millennium Development Goal

MoA Ministry of Agriculture

MT Metric Ton(s)

NCC National Coordinating Committee

NPD National Project Director

NSC National Seed Cooperation

PAU Pyongyang Agricultural University

PB Project Board

PDS Public Distribution System

PHMU Post Harvest Management Project Unit

SPFS Special Program for Food Security

SDC Swiss Agency for Humanitarian Aid and Development Cooperation

TCP Technical Cooperation Programme

ToRs Terms of Reference

UN United Nations

UNDP United Nations Development Programme

WFP United Nations World Food Programme

# Section 1:

# Introduction And Project Background

The United Nations Development Programme (UNDP) in Pyongyang commissioned in late March 2014 the evaluation of two agriculture sector projects that are since 2011 being implemented in the Democratic Peoples´ Republic of Korea (DPRK).

Both of these projects are financed through UNDP core funding and both are being executed by the Food and Agriculture Organization of the United Nations (FAO). The “Improved Seed Production for Sustainable Agriculture” project aims to strengthen food security in DPRK through support for quality seed multiplication, while the second project “Reduction of Post-Harvest Losses for Food Security” intends to importantly reduce food losses by introducing better post-harvest management techniques and technologies. With a recently approved no-cost extension both projects are currently scheduled to finalize remaining activities by 31 October 2014.

This evaluation is intended to do a stocktaking of the projects in close consultation with all the concerned stakeholders and, based on that, provide recommendations to the Government of the DPR Korea, the resource partner – UNDP, and the executing partner – FAO on the progress achieved and effectiveness of stated outputs.

Based on the assessment of the project performance the evaluation is meant to draw specific conclusions and make proposals for any further necessary action by the Government of the DPRK, UNDP and FAO to ensure sustainable development, including any need for additional assistance and activities of the project prior to its completion.

Work on this evaluation was carried out in two segments:

* A two week field mission to the Democratic People´s Republic of Korea between 27 March and 10 April 2014, which included meetings in Pyongyang and field visits to six project sites, and
* Desk work for document review and report writing during the second half of April 2014.

The information in this evaluation report is organized into four sections:

* Section 1 contains an Introduction with brief background information on the two evaluated projects,
* Section 2 entails the evaluation objective and scope, evaluation criteria and questions as well as further details of the evaluation methodology.
* Section 3 presents the findings of the evaluation.
* Section 4 finally contains lessons learned, conclusions and recommendations.

One of the factors constraining the country’s efforts to achieve food security has been poor quality seeds. The seed multiplication sub-sector is struggling with weak research infrastructure and extension programme, low level of awareness among farmers, low level of technology adoption and poor technology applications. All these factors have affected efforts to increase agricultural productivity and rural livelihoods in a sustainable manner. To address this, the “Improved Seed Production for Sustainable Agriculture” project has been supporting

* interventions at 3 seed farms and 1 Seed Inspection Centre as demonstration to support quality seed multiplication (improved quality and variety),
* capacity enhancement at the farm level, providing
* appropriate technology,
* seed management skills and
* policy reviews and reforms with a bid to increase productivity and food availability in an ecologically sustainable manner for sustainable rural livelihoods.

The high rate of post-harvest losses has been identified to have serious dampening effect on the country’s efforts for increased agricultural productivity and food security. The Post-Harvest project has been supporting inventions to enhance capability in post-harvest handling of grains through

* introducing, testing, and optimizing improved, new and appropriate post-harvest technologies, and
* raising skills development in the management, maintenance and repair of equipment at the county and farm levels. Six cooperative farms have been supported by the project as demonstration farms to
  + raise the awareness of famers on strategic actions and
  + strengthen capacities in loss assessment and use of technologies to reduce post-harvest losses.

## 

# Section 2:

# Evaluation Scope, Objectives, Methodology and Questions

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The evaluation was conducted in line with UNDP guidelines[[1]](#footnote-1) and combined context, outcome and process evaluation tools and approaches to provide rich and practical information. The evaluation:

* examined how the projects functioned within their economic, social, and political environment and setting (context evaluation);
* explored how the projects were implemented including the operational processes through which desired outputs are achieved. It examined the planning, setting up, and carrying out of the projects, as well as the documentation of the evolution of the project (process evaluation); and
* assessed the short- and longer-term results of the projects and evaluated the extent to which the projects contribute to or produce the intended improvements as they are described in the project documents (output evaluation). Specific focus was on this part of the evaluation to capture results and analyze whether, why and how the outputs have been achieved.

## 2.1. Evaluation Scope

This evaluation is limited to the assessment of the projects´ performance during the period from March 2011 (project start) to March/April 2014, including project objectives, inputs, activities and the extent to which anticipated outputs were produced. In addition it considers relevance and continued linkage with outcome.

The implementation period of the two projects has in December 2013 been extended until 31 October 2014 and numerous particularly important activities are yet to be carried out during that time. Outputs achieved at this point are therefore only partial and most of the data for measuring post-harvest loss reductions achieved through the project will be coming from a survey that is yet to be undertaken during the 2014 cropping season.

## 2.2. Evaluation Objectives

The evaluation was intended

* to do a stocktaking of the projects,
* to assess the so far achieved progress towards realizing the stated outputs and
* to analyze, in close consultation with all the concerned stakeholders, the effectiveness of the interventions.

Based on this analysis, the evaluation was to provide the DPRK Government, the resource partner (UNDP), and the executing partner (FAO) with

* recommendations regarding options on project extension and/or substantive revisions for ensuring sustainable development, including
* any need for additional assistance and activities of the project prior to its completion.

The evaluation also means to draw attention to any lessons of general interest.

## 2.3. Evaluation Methodology

In line with the mission Terms of Reference and based on initial consultations with key programme staff in Pyongyang, it was decided that the following techniques and approaches were to be used for the gathering, verification and analysis of the for the evaluation required data: a thorough review of all available documents, individual semi-structured interviews with key stakeholders, direct observations during visits to selected project sites, as well as focus group discussions with beneficiary representatives at the visited cooperative farms.

Pyongyang based UNDP and FAO staff played an important role in providing necessary documentation, arranging meetings, supporting logistics and providing feedback on the draft evaluation report. The high level of stakeholders’ engagement in the evaluation was instrumental for ensuring credibility of the evaluation and the results.

Focus Group discussions had to be conducted in local language, which to some degree negatively impacted on the level of information exchange. Possibly resulting limitations for the evaluation were mitigated through the use of qualified translators.

A limiting factor for the evaluation was however the availability of sufficiently detailed, reliable and independently verifiable data in DPRK, including production and productivity related statistics for each of the nine cooperative farms that benefited from the two projects .

## Document Reviews

Prior to and during field visits, the Evaluator reviewed a substantial number of annual and semi-annual project reports, minutes from Project Board meetings, work plans, project documents, mission reports, implementing partner agreements, and other materials related to project activities. The Evaluator also consulted published (i.e., on the UNDP and FAO websites) and unpublished materials related to the food security situation in general and to the field visits. While on site, the Evaluator collected and later reviewed additional information pertaining to site-specific activities. The purpose of collecting these documents was to increase the Evaluators understanding of implemented activities; provide a context for the project review process; and identify existing data to serve as relevant inputs for the analysis. The full list of documents reviewed as part of this evaluation is found in Annex 2.

## Individual Semi-Structured Interviews

A total of 16 key stakeholder representatives were individually interviewed between 27 March and 10 April 2014, with semi-structured interviews lasting in most cases between 60 and 120 minutes. The large majority of questions asked during these interviews were individually selected from a master questionnaire (Annex 6) that the Evaluator had developed on the basis of the mission ToRs. The semi-structured nature of the interviews allowed however to also focus more closely on particular topics. All individual interviews were conducted in English language. While discussions with UN staff and NCC representatives took place at UNDP and FAO compounds, interlocutors from the Ministry of Agriculture agreed to be interviewed at a Pyongyang hotel in order to respect existing meeting restrictions. Unless interlocutors preferred a different arrangement, the UNDP M&E Expert and UNDP Programme Assistant were generally also present during individual interviews. A complete list of interview partners is found in Annex 1.

## Direct Observations During Site Visits:

Site visits were conducted during three full days on 1, 3 and 7 April 2014 and included the following six locations:

* Maekjon Seed Farm, Kangdong County, Pyongyang
* Unpa Seed Farm, Unpa County, North Hwanghae Province
* Pyongam Cooperative Farm, Koksan County, North Hwanghae Province
* Daepyong Cooperative Farm, Singye County, North Hwanghae Province
* Soho Cooperative Farm, Mundok County, South Pyongan Province
* Jangsuwon Cooperative Farm

Maekjon and Unpa Seed Farms are two of the three beneficiary seed cooperative farms under the “Improved Seed Production for Sustainable Agriculture” project.

Pyongam, Daepyong, Soho and Jangsuwon Cooperative Farms are four out of totally six farms directly benefitting from the “Reduction of Post-Harvest Losses for Food Security” project.

The project sites to be visited during the evaluation represented different types of topography and primary crops produced (irrigated lowland paddy area, corn on sloping lands, vegetable and rice seed production).

Site visits were organized by the National Project Coordinator of the DPRK Ministry of Agriculture. The FAO Chief Technical Advisor, UNDP M&E Specialist, UNDP Programme Assistant, FAO Operations Assistant, as well as management committee members of respective cooperative farms accompanied the Evaluator during each of the site visits.

Each site visit lasted several hours and included detailed inspections of infrastructures (threshing areas, drying facilities, seed and crop storage facilities, seed laboratories, construction sites of greenhouses, etc), equipments (farm machinery, threshers, rice mills, etc), work-team and cropping areas.

## Focus Group Discussions

During each of the site visits a Focus Group discussion with a number of key members (farm manager, chief engineer, heads of work teams, etc.) of the respective beneficiary cooperative farm was conducted with the assistance of the National Project Coordinator and the presence of FAO and UNDP staff (FAO Chief Technical Advisor, UNDP M&E Specialist, UNDP Programme Assistant, FAO Operations Assistant).

Specific topics covered during the discussions included the following:

* preliminary experiences made with individual pieces of equipment supplied through the projects
* estimated farm-level production benefits already obtained as a direct result of the newly introduced infrastructure, equipment and technology
* estimated farm-level production benefits already obtained through the projects´ capacity building components and subsequent improvements in seed/post-harvest management
* estimates on how farm-level gains possibly also turned into direct benefits for sub-work teams and individual cooperative farmers
* experiences made with regard to the maintenance of the equipment and the quality of the supplied equipment and infrastructures
* priorities during the remaining project period
* potential for a broader replication of project gains in other locations
* lessons learned
* perceived priorities regarding potential future programming in respective domains

Several of the Focus Groups were able to document observed changes through preliminary internal data sets collected during the past several years by members of the farm management. Some of this potentially very valuable data has been quoted in this evaluation; this however with the understanding that the presented information was at this stage only partial and that the projects would need to complete respective figures during the remaining implementation period.

## 2.4. Evaluation Criteria

The generally in UNDP evaluations applied criteria of “Relevance”, “Effectiveness”, “Efficiency”, “Impact” and “Sustainability” were primarily used to help focus evaluation objectives. Mission ToR highlighted furthermore the “Management” element with its more integrated character and multi-faceted linkages with several of the other above criteria.

2.5. Evaluation Questions

Evaluation Terms of Reference included the following list of specific topics to be assessed:

a). The relevance of the project to development priorities and needs.

b). The clarity and realism of the project's development and immediate objectives, including prospects for sustainability.

c). The validities of assumptions and frameworks informing the project.

d). The quality, clarity and adequacy of project design including:

* the clarity and logical consistency between, inputs, activities, outputs and progress towards achievement of objectives (quality, quantity and time-frame);
* the cost-effectiveness of the project design.

e). The efficiency and adequacy of project implementation including:

* availability of funds as compared with budget;
* the quality and timeliness of input delivery by both FAO and the Government of the DPRK;
* managerial and work efficiency;
* implementation difficulties;
* adequacy of monitoring and reporting;
* the reliability of data, sources and means of verification;
* the extent of national support and commitment and
* the quality and quantity of administrative and technical support by FAO.

f). Efficiency and accountability in overall management of the project including;

* procurement of equipment and other deliverables; processes and quality assurance of goods received
* qualitative and quantitative assessment and evaluation on construction of infra-structures and buildings at the project sites
* efficiency and transparency in overall financial management for project activities
* adequacy of reports submitted by FAO to UNDP.

g). Effectiveness of project results, including a full and systematic assessment of outputs produced to date (quantity and quality as compared with work-plan and objectives). The mission will especially review the status and quality of work on:

* Improved seed production for sustainable agriculture;
* Reduction of post-harvest losses for food security;
* Capacity building.

h). The prospects for sustaining the projects’ results by the beneficiaries and the host institutions after the termination of the project

i). The cost-effectiveness of project activities.

Based on the above list the Evaluator developed the master questionnaire in Annex 6, which was then used to draw key questions from during individual and group interviews.

# Section 3:

# Evaluation Findings

## 3.1. Relevance

In evaluating the relevance of the two projects the evaluation focused primarily on the extent to which the project objectives were consistent with national and local policies and priorities, beneficiaries’ requirements and partners’ and donors’ policies. Key questions addressed under this heading include the following:

* To what extent are the project objectives still congruent with current development priorities and needs?
* Realism and consistency of the project's (development and immediate) objectives?
* Clarity, quality and adequacy of project design?

An essential sub-category of relevance is the criteria of appropriateness. While relevance examines the importance of the initiative relative to the needs and priorities of intended beneficiaries, appropriateness examines whether the initiative as it is operationalized is acceptable and is feasible

within the local context. Relevance also considers the extent to which the initiatives are responsive to empowerment and gender equality issues.

## 3.1.1. Relevance Of The Projects To Development Priorities And Needs

“Improved Seed Production for Sustainable Agriculture” and “Reduction of Post-Harvest Losses for Food Security” are two key projects of the “Food security and Rural Development” component of the UNDP Country Programme (CPC). UNDP`s country programme document for the Democratic People’s Republic of Korea (2011-2015), prepared in close consultation with all stakeholders including relevant ministries, research institutions, donors and United Nations agencies, reflects the agreement on the United Nations Strategic Framework (2011-2015) between the Government and the United Nations country team.

Through the two evaluated projects the CPC supports the Government in achieving its 2015

* National Development Goal One to “Improve the Living Standard of People” and
* underlying target of “Ensuring Food Security” in line with the Millennium Development Goals (MDGs).

With a view to accelerate progress towards universal and national development goals, the two evaluated projects focus on contributing to “Nutrition and Food Security”, which is also one of four United Nations Strategic Framework (2011-2015) MDG-based priority areas in DPRK. The UNSF (2011-2015) aims at achieving two outcomes for nutrition, namely:

* Improved nutritional status of targeted population to enable them to lead healthy lives, and,
* Sustained household level food security.

Aggregate farm production in DPRK is estimated to have increased for the third consecutive year and exceed 5 million mt for the second year in a row in 2013, bringing the country closest to sufficiency in almost two decades. Despite this improvement, major challenges remain to reaching the food production level of over 6 million mt achieved in the late 1980s through cooperation within the former Soviet Union trading arrangements.

In addition to geographical and climatic constraints[[2]](#footnote-2), production is currently mainly limited by

* agricultural input shortages (improved seed varieties of adequate quality, lime, pesticides, plastic sheeting[[3]](#footnote-3), adequate supply of plant nutrients through the application of different chemical fertilizers and organic matter, etc.),
* the degree of mechanization[[4]](#footnote-4),
* a departure from sound agricultural techniques (adequate crop rotation[[5]](#footnote-5), soil conservation[[6]](#footnote-6), timeliness of harvesting and threshing processes[[7]](#footnote-7), etc.) and
* the level of incentives for stimulating increased production and productivity (including for example the comparatively low price level for soybean, uncertainties linked to labor investments into activities that will only produce benefits in subsequent years, such as longer term measures to improve soil quality, etc.).

Over the years, domestic production of fertilizer has declined to a level of about 10 percent of total requirement[[8]](#footnote-8), increasing dependence on imported fertilizer, reducing its overall use and creating imbalances in the applied mix of plant nutrients (including a very low application rate of phosphate and potassium[[9]](#footnote-9)). The foreign exchange situation combined with international restrictions on trade has, on the other hand, not allowed adequate commercial imports of much needed agricultural inputs such as fertilizer[[10]](#footnote-10), pesticides, plastic sheeting, spare parts for machinery, tires for tractors and trucks and fuel. Much needed lime application to improve fertility of acidic soils[[11]](#footnote-11), although improved lately, is constrained by the lack of transport facilities and fuel availability. Leguminous crops (soybean, mung bean, etc.) have been identified for many years as an essential addition to the DPRK crop mix, but to date, have not been planted at an adequate level. To overcome structural obstacles and provide greater incentives to farmers for increasing productivity, meaningful reforms in the tightly controlled marketing system[[12]](#footnote-12) and pricing policy for agricultural produce (such as soybean[[13]](#footnote-13)) and inputs[[14]](#footnote-14) have been recommended. The net income of farmers varies widely depending on the surplus they can produce and the cost of inputs. Lack of access to farmers’ markets to sell produce over and above the allocated production quota remains a major limitation[[15]](#footnote-15).

Considering its developmental needs and priorities the DPRK Government set the following sectoral policies:

* innovation in breeding and seed multiplication,
* double cropping,
* improvement in potato farming,
* improvement in soybean farming and
* active introduction of advanced farming systems (including organic farming),

and identified in 2012 the following five governmental strategic objectives in the food and agriculture sector:

* Priority A: Strengthening national food and nutritional security,
* Priority B: Improving natural resource management,
* Priority C: Improved rural livelihood,
* Priority D: Improved mitigation of the impact of climate change on agriculture and improved disaster management, and,
* Priority E: Improvement in institutional capacity for agricultural research, extension and administration.

Both, the “Improved Seed Production for Sustainable Agriculture” and the “Reduction of Post-Harvest Losses for Food Security” projects are fully in line with these priorities and specifically contribute to the intended

* Outcome A1 (Increased food production) and
* Outcome A2 (reduced food loss in production and supply chains), as well as the defined
* Priority Output A1-1 (Enhanced capacity of seed farms to introduce superior varieties)” and
* Priority Output A2-1 (Best practices for reduced on-farm post-harvest-loss developed)

of the “Country Programming Framework (CPF) 2012-2015 for The Cooperation and Partnership Between FAO and the Government of the Democratic People´s Republic of Korea”.

The Government of the Democratic People´s Republic of Korea has since the adoption of the above framework continued to highlight the key importance it gives to the agriculture sector in its strive to rapidly and sustainably improve national food security and eventually reach food self-sufficiency. In his New Year Address 2014, as well as his message delivered during DPRK´s first national conference of farm sub-work team leaders[[16]](#footnote-16) Mr. Kim Jong Un, Supreme Leader of the Korean people, in fact underlined, that agriculture needed to be defined as the priority area for improving the economy and people’s lives in DPRK. At this occasion the Supreme Leader personally emphasized details of DPRK farming policies, including a specific call to implement a seed revolution, identifying short growing periods, efficient uptake of available fertilizer and pest resistance as key criteria for the development of improved crop seeds in DPRK.

In its Special Report of 28 November 2013 the FAO/WFP Crop and Food Security Assessment Mission (CFSAM) to the Democratic People´s Republic of Korea identified a cereal import requirement of 340,000 mt for the 2013/14 marketing year (November/October) and estimated the uncovered food deficit in DPRK to be in the range of 40,000 mt assuming that an import target of 300,000 mt of cereals can be met. These figures are based on the Mission’s estimate of total utilization needs of 5.37 million mt of cereal equivalent (rice in milled terms) and an overall production forecast of about 5.03 million mt of cereal equivalent (which corresponds to expected 5.98 million mt of food output expressed in paddy, soybeans and cereal equivalent of potatoes and is mainly attributed to an increase in paddy harvest due to generally favorable weather conditions) from cooperative farms, plots on sloping land and household gardens during 2013/14.

In 2012/13 the total cereal imports in the country declined sharply from the year before mainly due to a drop in bilateral and multilateral food aid. During the 2012/13 (November/October) marketing year, DPRK imported 398,636 mt of cereals. The country has been dependent on large quantities of food imports, primarily from China and the Russian Federation, over the last two decades with total imports declining from about a million mt of cereals during the mid-2000s to under 300,000 mt in 2008/09. In general, commercial imports have been relatively stable in recent years, while international assistance, bilateral as well as multilateral food aid, has fluctuated significantly.

Although a slight increase in cereal production was noted this year, food consumption at the household level remains limited in quantity and quality. Similar to the findings from last year’s CFSAM, a typical DPRK household consumes about 350 grams of cereals per person per day. In households dependent on the public distribution system (PDS) for their cereals, the average consumption this year tends to be smaller, at 310 grams of cereals per person per day, providing approximately 1,250 kilocalories. If calories from daily vegetable and oil consumption are included, the calorie gap between the average DPRK diet and the international recommendation of 2,100 kcal per day is estimated at 30 percent, similar to that identified in last year’s CFSAM. Available 2013 data also indicated that only 16 - 25 percent of households had acceptable food consumption, while about half had borderline and one-third poor food consumption. Despite recorded improvements of the nutrition situation in recent years, the 2013 CVSAM report highlighted that stunting rates in DPRK remain high and that micronutrient deficiencies are continuing to be of particular concern.

To improve food and nutrition security, the Mission therefore recommended national and international support for

* sustainable farming practices,
* better price and market incentives for farmers,
* improvements in farm mechanization,
* stimulations for spring crop production,
* implement disaster preparedness and response programmes,
* improved dietary diversity and feeding practices for young children and women through different strategies such as behavioral change, market reform, and encouraging livestock and fish production,
* strengthening treatment of severe and moderate acute malnutrition, and,
* improving hygiene and sanitation practices.

Reducing post harvest losses in major food crops and improving food production through better and more widely available quality seeds are clearly two essential elements in the overall struggle to reach sustainable food security in DPRK and to improve people´s access to an increasing and more diversified food production. In addition, the two evaluated projects clearly build on previously expressed recommendations and lessons learned from past programming, including specific UNDP recommendations to expand regional and South-South cooperation that is beneficial to the country, and to favor projects that are sufficiently broad in scope to have maximum development impact.

## 3.1.2. Realism and Consistency of Project Objectives

The Results and Resources Framework of the **“Improved Seed Production for Sustainable Agriculture”** project document includes the following Project Outcome Indicators, Outputs and Output Targets:

**Outcome Indicators:**

* Enhanced capacity of professionals engaged in planning and implementation of a coordinated seed programme
* Enhanced capabilities of professionals in production, processing and testing of seeds
* Enhanced capabilities of professionals and improved facilities for seed production and conditioning
* Enhanced capabilities of professionals and improved facilities for seed certification
* Farmers´ awareness and knowledge for use of certified quality of seeds of recommended varieties improved
* Availability of quality seeds in higher quantities that are suited to the agro and ecological conditions of the DPRK

**Outputs and Output Targets:**

* Output 1: Seed policy and seed ordinance issues addressed and capacity enhanced in planning, implementing and monitoring seed programmes – Output 1 Targets: a) Review and Adoption of new seed ordinances, laws and policies; b) Training plan for extension and farm-level team leaders and technical staff for MoA Seed Department.
* Output 2: Appropriate technology in seed production, processing, and quality control introduced – Output 2 Targets: a) Introduce modern seed technical knowledge, b) Use of modern, efficient knowledge and practices.
* Output 3: Enhanced capacity of farmers in seed conditioning, seed certification for relevant farm managers and extension staff through hands-on use of model seed cleaning equipment and seed testing facilities (including those already established by SDC), and through training and study tours –Output 3 Targets: a) Implemented training plan and study tours and/or local training for seed production and seed cleaning technicians and seed certification technicians at farm level; b) completed seed production and testing manuals; c) Model facilities for seed storage, production, drying, cleaning and testing established; d) Implemented training plan and study tours for seed at cooperative farm level; e) Completed seed production and testing manuals
* Output 4: Farmer´s awareness raised in using quality seeds, certified seed of improved varieties; and exposure to regional experience in seed production systems for rice and vegetables, with emphasis on China as a model – Output 4 Targets: a) Farmers field demonstrations held (10 locations in year 2); b) Farmers study tour to China completed; c) Evaluation and feedback on farmers awareness and impact of field days collected, and a follow-up demonstration programme organized with agricultural extension agencies.

The Results and Resources Framework of the **“Reduction of Post Harvest Losses for Food Security”** project document on the other hand lists the following as Outcome Indicator Targets, Outputs and Output Targets:

**Outcome Indicator Targets**

* A core team of five master trainers trained in the port harvest handling of grains
* Six assessment reports that provide information on the status of post harvest in the DPRK
* Four county post harvest teams trained in post harvest handling of grains, and equipped with training skills
* One hundred key farmers on five farms trained in post harvest handling of grains
* Six demonstration farms established, each capable of reducing current post harvest losses by at least 50% (crop saving of 10%)
* Recommendations and policies for reducing post harvest loss in DPRK
* County officials and farmer extension material detailing methods and techniques for reducing on-farm post harvest loss published and disseminated

**Outputs and Output Targets:**

* Output 1: Project management system established and agreed to; national project counterparts trained in project scope and post harvest technologies management – Output Targets: Operational Post Harvest Management Project Unit; All project staff have received background training in post harvest handling and management; Detailed work plans and assignment of responsibilities; Training manual and reference guide available for master trainers, county trainers and all project personnel; Master trainers fully trained in key project areas; Master trainers and other key project personnel acquire knowledge during study tours and apply this knowledge toward further project development; Detailed knowledge of losses, on farm-logistics, and on-farm storage.
* Output 2: Technologies introduced, tested, demonstrated and optimized – Output Targets: New machinery with simple associated working instructions and maintenance procedures and logs available for the demonstration farm; Farm post-harvest management practices optimized.
* Output 3: Capacities development in good post harvest practice and in the management, maintenance and repair of equipment; Capacities developed in loss assessment:

-3.1. Training capacity of 3 officers in 4 countries (total 12 persons) improved

-3.2. Twenty farmers on six farms (120) fully trained in post harvest techniques

-3.3. Methodologies for reducing quantitative and qualitative losses and reducing labour input demonstrated at six demonstration farms

-3.4. Strengthen counterpart capacity to implement selected project components.

-Output Targets: New improved support structures in use; County level staff fully trained in the key project areas; County staff familiarized with new management and technology practices; Farmers and work team supervisors have increased awareness of post harvest problems and issues and are fully trained in key post harvest techniques; A larger number of farmers within the demonstration farms, and neighboring farms aware of strategies for reducing post harvest losses; Four farms demonstrating improved, sustainable post harvest technology and management systems for rice; On farm demonstrations and improved, sustainable post harvest technologies and management practices applied for wheat; Project counterparts implement good post harvest practices.

Planned activities and outputs of both projects were widely seen as appropriate and consistent with the intended impacts and effects, overall goal and the attainment of objectives.

Individually stated project objectives were furthermore generally believed to be realistic and achievable during a 3-year implementation period on the foreseen number of demonstration / pilot cooperative farms.

However, to make full use of realized benefits and up-scale project achievements from the current pilot level to a larger geographic area or even national scale, additional resources will be required. Optimal longer-term results will to a large degree depend on the right mix of capacity building, improved infrastructure and availability of better equipment.

Being able to achieve the Post Harvest project outcome target of “Six demonstration farms capable of reducing post harvest losses by at least 50% (crop savings of 10%)” depends partly on the ratio by which improved equipment supplied under this project will replace less efficient previous technology in each location. The targeted gains of 50% may therefore only be fully realized in those sections of the demonstration farms where there was a sufficiently important replacement level of the outdated equipment.

## 3.1.3. Clarity, Quality and Adequacy of Project Design

Significant design weaknesses for both projects were widely acknowledged by the majority of interlocutors consulted during this evaluation. The issue had in fact also already been raised by a UNDP Office of Audit and Investigations (OAI) audit of the UNDP DPRK country office (Report No. 1138 issued on 17 October 2013).

The Results and Resources Framework in the Project Documents included for example output baselines, indicators and targets that were to a large degree not measurable and not sufficiently specific, although the UNDP country programme document for the Democratic People’s Republic of Korea (2011-2015) highlights the “need to sharpen the focus on results-based management, including results-based reporting, monitoring and evaluation and capacity development in this area which should include action for both the country office and for national institutions”. The “Improved Seed Production for Sustainable Agriculture” project document does not contain any section on “Quality Management for Project Activity Results”. The second project document “Reduction of Post Harvest Losses for Food Security” does contain a section on quality management but it is at least in part too un-specific to be of full value.

The evaluation furthermore noted a number of inconsistencies and discrepancies between different sections of the project documents. The front pages of the “Reduction of Post Harvest Losses for Food Security” and “Improved Seed Production for Sustainable Agriculture” project documents list for example sets of expected project outputs that differ from the ones in the respective Results and Resources Frameworks.

Both project documents contain a risk analysis in which factors including unfavorable weather conditions, and potential problems regarding site access, seed availability, government support, procurement, labor market issues and translations were identified. While all of these identified risks were valid as such, most of them only had a limited impact on the implementation of the projects. Most important were the anticipated impacts in terms of difficulties for obtaining required data, as well as for acquiring and installing equipment. Financial transaction problems had not been anticipated as being a specific risk.

## 3.1.4. Responsiveness To Gender Equality

Female beneficiaries outnumber males on all nine cooperative farms under the two evaluated projects. Overall the female / male primary beneficiary ratio is 54 /46. At the management level of the beneficiary cooperatives women are also importantly represented, although at a slightly lower rate.

Although the projects applied a non-discriminatory, gender-neutral approach, females were particularly encouraged to participate in training activities and technical discussions. This was even more pronounced in the specific domains where women were found to play a more important role, including post harvest processing and storage as well as the management of vegetable crops.

The technology advances introduced through the projects, including better maize shellers and covered drying infrastructures, reportedly reduced the overall work load and helped to improve work conditions for the mainly female staff carrying out the various operations in the threshing barns during harvest time. Better drying and storage furthermore improves the overall quality and quantity of food available for the farm families.

## 3.2. Effectiveness

The effectiveness is generally considered as the extent to which the development intervention’s objectives were achieved, or are expected to be achieved, taking into account their relative importance. In this evaluation the effectiveness is assessed by examining

* the reported progress towards producing the planned project outputs,
* the extent of national support and commitment,
* so far available (partial and preliminary) data from demonstration farms on observed post harvest loss reductions, as well as recorded
* qualitative and quantitative gains in the multiplication of various seed types.

## 3.2.1. Assessment of Outputs Produced to Date -

## Improved Seed Production for Sustainable Agriculture

The following table provides a comparison of planned outputs for the “Improved Seed Production for Sustainable Agriculture” project and their current status as recorded in March 2014. The project has four outputs. Progress is measured against the related targets / indicators, comparing the current situation with the baseline, where available.

|  |  |  |  |
| --- | --- | --- | --- |
| **Output as defined in Project Document** | **Specific output targets as defined in Project Document** | **Status of outputs produced to date (March 2014)** | **Remarks**  **(as of March 2014)** |
| Output 1:  Seed policy and seed ordinance issues addressed and capacity enhanced in planning, implementing and monitoring seed programmes  *Baseline: policy needing review and revision*  *Indicators: Approval and adoption National agriculture-first policy and relevant ordnance* | Review and Adoption of new seed ordinances, laws and policies; | -Studied Seed Policy and prepared Seed Guidelines for field staff; No need to change Seed Policy; Priority has been given on its implementation.  -Supported in the preparation of seed development priorities and plans for DPRK.  -Raised awareness on National agriculture-first policy at different forums | Partially achieved |
| Training plan for extension and farm-level team leaders and technical staff for MoA Seed Department | Seminar on seed programme development, seed legislation, seed policy issues and planning of seed production carried out. | Partially achieved |
| Output 2:  Appropriate technology in seed production, processing, and quality control introduced  *Baseline: rudimentary technology that is inefficient and needs replacement*  *Indicators: Basic technology for seed production in use* | Introduce modern seed technical knowledge | -Fielded International Consultants on Vegetable Seed Production, Maintenance Breeding & Breeder Seed Production, and Cereal Seed Multiplication & Seed Quality Control.  -Three out of five initially planned ‘study tours on seed’ carried out in China & Thailand, India, and Vietnam.  -Ten trainings on seed were conducted by International and National Consultants, CTA and National Project Coordinator. | Partially achieved (except for some planned hybrid rice, maize and vegetables seed growing techniques) |
| Use of modern, efficient knowledge and practices | Adequate documentation of use through remaining (March – September 2014) project progress monitoring reports pending | Proof of achievement pending |
| Output 3:  Enhanced capacity of farmers in seed conditioning, seed certification for relevant farm managers and extension staff through hands-on use of model seed cleaning equipment and seed testing facilities (including those already established by SDC), and through training and study tours  *Baseline: Weak capacity among farmers and farm manager; Provincial seed inspection centres not adequately equipped. Seed and field standards set for seed certification to be established*  *Indicators: Availability of know-how and skills among farmers and farm managers for managing good seed programme* | Implemented training plan and study tours and/or local training for seed production and seed cleaning technicians and seed certification technicians at farm level | - Technical staffs trained on use of equipments/machineries including seed processing and seed testing.  - Carried out altogether 10 trainings at cooperative farm, county and Pyongyang levels  - Additional trainings to be carried out in 2014 | Partially achieved  (training ongoing) |
| Completed seed production and testing manuals | -Seed production guidelines prepared  -Seed testing guidelines prepared.  -Other manuals produced including a) Seed Production of Major Vegetable Crops – Principles and Practices, 75 pages, b) Training Manual on Maintenance Breeding & Breeder Seed Production in Rice, 12 pages, c) Cereal Seed Production, Processing and Quality Control of Major Cereal Crops (Paddy, Maize and Wheat), 66 pages, and d) Manual on ‘Maize Breeding and Seed Production’, 99 pages | Achieved |
| Model facilities for seed storage, production, drying, cleaning and testing established | -Procurement and installation of equipments/machineries carried out  -Model facilities for seed storage, production, drying, cleaning and testing established | Partially achieved  (project activities still ongoing) |
| Output 4:  Farmer´s awareness raised in using quality seeds, certified seed of improved varieties; and exposure to regional experience in seed production systems for rice and vegetables, with emphasis on China as a model  *Baseline: Low awareness of criticality of high quality seeds and good varieties to increase productivity*  *Indicators: Upgraded skills of researchers, professionals and technicians engaged in planning of seed production, maintenance of varieties, seed multiplication and seed conditioning* | Farmers field demonstrations held (10 locations in year 2) | -Carried out field demonstrations and briefed and trained partners in provinces on field days.  -Developed literature and awareness material for field days (in Korean).  -Arranged seed, fertilizers and other material and equipment needed for demonstrations. | Partially achieved  (project activities still ongoing) |
| Farmers study tour to China completed | -Cancellation following shift in UNDP policy | Not achieved |
| Evaluation and feedback on farmers awareness and impact of field days collected, and a follow-up demonstration programme organized with agricultural extension agencies | -Secured feedback from cooperative farmers.  -Organized continuation of field demonstrations through national extension agencies. | Achieved |

## 3.2.2. Assessment of Outputs Produced to Date -

## Reduction of Post Harvest Losses for Food Security

The following table provides a comparison of planned outputs for the “Reduction of Post Harvest Losses for Food Security” project and their current status as recorded in March 2014. The project has three outputs. Progress is measured against the related targets / indicators, comparing the current situation with the baseline, where available.

|  |  |  |  |
| --- | --- | --- | --- |
| **Output as defined in Project Document** | **Specific output targets as in Project Document** | **Status of outputs produced to date (March 2014)** | **Remarks**  **(as of March 2014)** |
| Output 1:  Project management system established and agreed to; national project counterparts trained in project scope and post harvest technologies management  *Baseline: No project Management in place or counterparts mobilized*  *Indicators: Work plans, staff and counterparts in place, Master trainers trained and study tours successfully organised* | Operational Post Harvest Management Project Unit (PHMPU). | PHL project unit continued to remain operational by 03/2014. | Partially achieved  (to remain operational till project end) |
| All project staff have received background training in post harvest handling and management. | All project staffs have received background training in post –harvest handling and management. | Partially achieved  (activities still ongoing) |
| Detailed project work plans. | Annual Work Plans (including for 2013 and 2014) exist. | Achieved |
| Training manual and reference guide available. | Prepared training manual and reference guide available for master trainers, country trainers and all project personnel. | Partially achieved (activities ongoing) |
| Master trainers fully trained in key projects areas. | A core team of five master trainers[[17]](#footnote-17) has been trained in the post harvest handling of grains. Master trainers fully trained in key projects areas by International and National Consultants, CTA and National Project Coordinator. | Achieved |
| Master trainers and other personnel acquire knowledge during study tours and apply this knowledge toward further project development. | Master trainers and other personnel acquired knowledge and skills during study tours in Thailand and Vietnam and applied their knowledge and skills towards further development of project. | Partially achieved  (activities still ongoing) |
| Detailed knowledge of losses, on-farm logistics, and on-farm storage. | Detailed base-line PHL data has been collected during 2012/2013. To measure PHL reductions achieved through the project a comparative analysis of data sets will need to be undertaken during 2014 (including collection of adequately segregated PHL data for 2014). | Not achieved |
| Output 2:  Technologies introduced, tested, demonstrated and optimized.  *Baseline: Antiquated and inefficient post-harvest equipment used*  *Indicator: New technology introduced* | New machinery with simple  associated working instructions and maintenance procedures and logs available for the demonstration farms. | New equipments/machineries purchased, tested and techniques for use developed.  Work procedures drafted.  The introduction of equipment for harvesting, threshing and transportation has significantly increased the efficiency of post harvest operations, reduced losses and resulted in improved grain quality and safety by considerably shortening the time span between operations in the post-harvest chain.  In 2013 two corncob stores, two drying facilities and six threshing yards constructed. | Partially achieved  (activities still ongoing) |
| Farm post-harvest management practices optimized. | Techniques and conditions for sun drying paddy and corn optimized.  Work is underway in optimizing the use of the technology to improve on-farm efficiency and reduce losses. | Partially achieved |
| Output 3:  Capacities developed in good post harvest practice and in the management, maintenance and repair of equipment, capacities developed in loss assessment.  -3.1. Training capacity of 3 officers in 4 countries (total 12 persons) improved  -3.2. Twenty farmers on six farms (120) fully trained in post harvest techniques  -3.3. Methodologies for reducing quantitative and qualitative losses and reducing labour input demonstrated at six demonstration farms  -3.4. Strengthen counterpart capacity to implement selected project components.  *Baseline: Limited knowledge base on good post-harvest practices and on the management, maintenance and repair of equipments and machineries*  *Indicators: Existence of trained cooperative staff and technicians* | New improved support structures in use. | Altogether 13 threshing cum drying yards, each having size of 333 square meters, constructed and are in use. | Partially achieved |
| County level staff fully trained in the key project areas. | County level staff trained in the key project areas.  Four county post harvest teams have been trained in post harvest handling of grains, and equipped with training skills. | Partially achieved  (training still ongoing) |
| County staff familiarized with new management and technology practices. | County staff familiarized with new management and major technology practices.  Extension materials detailing methods and techniques for reducing on-farm post harvest losses have been prepared and distributed among county officials and cooperative farmers, including a) Power Point on ‘Post-harvest Management’, 38 pages, and b) Power Point on ‘Farm Post-harvest Mechanization Assessment in DPR Korea’, 37 pages | Partially achieved  (activities still ongoing) |
| Farmers and work team supervisors have increased awareness of post harvest problems and issues and are fully trained in key post harvest techniques. | Farmers and work team supervisors have increased awareness of post harvest problems and issues and are trained in key post harvest techniques. Nearly sixty cooperative farmers at six farms have been trained in the post harvest handling of grains. | Partially achieved  (activities still ongoing) |
| A large number of farmers within the demonstration farms, and neighboring farms aware of strategies for reducing post harvest losses. | A larger number of cooperative farmers within the demonstration cooperative farms, and neighbouring farms is aware of major strategies for reducing post harvest losses. | Partially achieved  (activities still ongoing) |
| Four farms demonstrating improved, sustainable post harvest technology and management systems for rice. | Sustainable postharvest technologies and management practices applied for rice, corn and wheat.  Six demonstration farms have been established, each capable of reducing current post harvest losses by at least 50 percent[[18]](#footnote-18) (crop saving of 10 percent, the equivalent of 1,569 tonnes of grain). | Partially achieved  (activities still ongoing) |
| On farm demonstrations; improved, sustainable postharvest technologies and management practices applied for wheat. | Sustainable postharvest technologies and management practices applied for rice, corn and wheat. | Partially achieved  (activities still ongoing) |
| Project counterparts implement good post-harvest practice. | Interim recommendations prepared and shared with concerned Government officials to reduce post harvest losses.  Project counterparts implemented good post-harvest practices. | Partially achieved |

## 3.2.3. Status of Capacity Building Components

The following table provides a comparison of planned capacity building components for the “Improved Agriculture” project and their current status as recorded in March 2014. Progress is measured against the respective targets, where available.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| “Improved Seed Production for Sustainable Agriculture” project | | | | | |
| Activity | No. of training | Total Parti-cipants | Trainees | Resource persons | Remarks |
| First LoA with Seed Management Department, MoA | | | | | |
| i. Seed seminar: Seed Programme development, seed legislation, seed policy issues and planning of seed production. | 1 | 15 | For technicians and extension staff of Seed Department of MOA, Project Managers from institutions participating in project, selected managers of seed farms, in charge of Central Seed Inspection Centre and selected managers of Provincial Crop Inspection Centres. | СТА, National Consultants, NPC, NPD (Seed), and Senior Lecturer from PAC.  NPC = National Project Coordinator; NPD = National Project Director (Seed); AAS = Academy of Agri. Science; PAC = Pyongyang Agricultural Campus. | Fully  Achieved  Implemented as in project’s target. |
| ii. Training workshop on maintenance breeding and breeder seed production. | 1 | 15 | For professionals from the 3 seed farms and provincial seed inspection centre under Seed project. | International consultant – Plant Breeder, CTA, Plant Breeder of AAS, and National Consultant. | Implemented as in project’s target |
| iii. Training workshop on cereal seed multiplication. | 1 | 15 | To train participants from the 3 seed farms and provincial seed inspection centre under Seed project. | International consultant – Cereal Seed Production, CTA, NPC, and national consultant. | Implemented as in project’s target |
| iv. Training workshop on vegetable seed multiplication. | 1 | 13 | To train participants from the 3 seed farms and provincial seed inspection centre under Seed project. | International consultant – Veg. Seed Production, CTA, NPC, and national consultant. | Implemented as in project’s target |
| v. Training workshop on seed quality control (field inspection and seed testing). | 1 | 15 | Participants from the 3 seed farms and provincial seed inspection centre under Seed project. | International consultant – Cereal Seed Production, CTA, NPC, and national consultant. | Implemented as in project’s target |
| **Second LoA with Seed Management Department, MoA** | | | | | |
| i. One training workshop on maintenance breeding and breeders seed production of cereals and vegetable seeds. | 1 | 15 | Participants from the 3 seed farms and provincial seed inspection centre under the project. | Concerned seed personnel and cooperative farm technicians returned from international study tours, National Consultant, and NPC. Reference materials: Reports of International Consultant – Plant Breeder, CTA and training materials received during study tours. | Partially achieved  # of training decreased from 2 to 1. participants decreased from 30 to 15[[19]](#footnote-19) |
| ii. One training workshop on cereals seed production (foundation and certified seed). | 1 | 15 | Participants from the 3 seed farms and provincial seed inspection centre under the project. | Concerned seed personnel and cooperative farm technicians returned from international study tours, National Consultant, and NPC. Reference materials: Reports of International Consultant – Cereal Seed Production & Quality Control, CTA and training materials received during study tours. | Partially achieved  # of training decreased from 2 to 1. participants decreased from 30 to 15. |
| iii. One training workshop on vegetable seed production including hybrid seed production of vegetables. | 1 | 15 | Participants from the 3 seed farms and provincial seed inspection centre under the project. | Concerned seed personnel and cooperative farm technicians returned from international study tours, National Consultant, and NPC. Reference materials: Reports of International Consultant – Veg. Seed Production, CTA and training materials received during study tours. | Partially achieved  # of training decreased from 2 to 1. participants decreased from 30 to 15. |
| iv. Two training workshops on field inspection and seed testing of cereals, vegetables and others crops in collaboration with central seed inspection centre. | 2 | 30 | 15 participants from seed farms and provincial seed inspection centre in each training. | Concerned seed personnel and cooperative farm technicians returned from international study tours, National Consultant, Head of Seed Inspection Centre, and NPC. Reference materials: Reports of International Consultant – Cereal Seed Production & Quality Control, CTA and training materials received during study tours. | Partially achieved  # of training decreased from 4 to 2. Accordingly, participants decreased from 60 to 30. |
| Planned training | | | | | |
| i. Workshop on use of seed testing equipments. | 3 | 15 | Strengthening counterpart capacity to implement selected project components | ‘Seed Quality Control’ through learning by doing practical trainings. | Training pending  Not achieved as of March 2014 |
| ii. Farmer's field days  (50 farmers will participate in each field day) | 10 | 500 | Cooperative farmers and field staff. | Organized on farmers' field, demonstrations to be supported by project with one selected variety each from rice, maize, wheat, vegetable and soybean to be planted on 0.25 ha demonstration plot of cooperative farms at 10 locations. | Training pending  Not achieved as of March 2014 |
| Study Tours | | | | | |
| Understanding seed management system and collecting information on modern seed technology (May 21 – June 09, 2012) | 1 | 7 | Members from the project farms, Pyongyang Agricultural Campus and concerned officers | In conjunction with the Center of International Cooperation Service, MoA of the People’s Republic of China, and Institute of Food and Production Development, Kasetsart University Thailand. | Fully Achieved  as targeted |
| Acquaintance with the multi crop seed programme planning, seed production techniques for breeder, foundation and certified seed including post harvest handling of seed (Dec. 26, 2012 to Jan. 14, 2013) | 1 | 7 | Members from the project farms, Pyongyang Agricultural Campus and concerned officers | Organized in conjunction with the Indian Agricultural Research Institute New Delhi, India. | Fully Achieved  as targeted |
| Techniques of seed certification and seed quality control system including field inspection procedures and seed testing techniques (May 06-24, 2013). | 1 | 4 |  | In conjunction with the Department of Crop Production, Ministry of Agriculture and Rural Development (MOARD) Hanoi, Vietnam. | Fully Achieved  as targeted |
| i. Installation of seed cleaning equipment, its maintenance and operation followed by visit to seed cleaning centers to acquaint with seed processing operation. Duration 3 weeks | 1 | 3 | Seed Processing technicians from Seed farms where seed cleaning equipment procured by the project will be installed. | Seed cleaning equipment supplier to the project | Not achieved  No PB approval; allocated budget US$ 30,000. |
| ii. Farmers study tour of People's Republic of China to learn crop and seed growing techniques specially hybrid rice, maize and vegetables. Duration 2weeks. | 1 | 10 | Women and men farmers from cooperative farms producing seed and crops. |  | Not achieved  No PB approval;  allocated  budget US$ 30,000. |

The following table provides a comparison of planned capacity building components for the “Reduction of Post Harvest Losses for Food Security” project and their current status as recorded in March 2014. Progress is measured against the respective targets, where available.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| “Reduction of Post Harvest Losses for Food Security” project | | | | | |
| Activity | No. of training | Total Parti-cipants | Trainees | Resource persons | Remarks |
| LoA with Pyongyang Agri. Campus | | | | | |
| i. Project inception training and project launch | 1 | 15 | Concerned staff members from 6 cooperative farms, Pyongyang Agri. Campus and the MoA | Lead Technical Officer, International Consultant – Post-harvest management, Sr. Field Programme Coordinator, and NPC. | Fully achieved  carried out jointly by FAO and MoA. |
| ii. Annual review - 2013 | 1 | 50 | Concerned staff members from 6 cooperative farms and the MoA | СТА, National Consultant, NPC, NPD (Post-harvest), and Senior Lecturer from PAC. | Fully achieved  as per project target |
| iii. Post harvest management and techniques | 1 | 20 | Concerned staff members from 6 cooperative farms and the MoA | СТА, International Consultant – Post-harvest Management, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| iv. Agricultural engineering | 1 | 20 | Concerned Mechanical Engineers and Mechanics from 6 cooperative farms and the MoA. | CTA, International Consultant – Agricultural Engineer, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| v. On - farm logistics | 1 | 20 | Concerned staff members from 6 cooperative farms and the MoA. | CTA, International Consultant – Agricultural Engineer, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| vi. Post harvest practices and techniques | 1 | 20 | Concerned staff members from 6 cooperative farms and related county. | Concerned staff member returned from International study tour, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| vii. Technology familiarization | 1 | 20 | Concerned staff members from 6 cooperative farms and related county. | Concerned staff member returned from International study tour, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| viii. Equipment maintenance and repair | 1 | 20 | Concerned Mechanical Engineers and Mechanics from 6 cooperative farms and related county. | Concerned staff member returned from International study tour, National Consultant, NPC, and Senior Lecturer from PAC. | Fully achieved  as per project target |
| **LoA with MoA** | | | | | |
| i. Study tour workshop | 3 | 90 | Concerned staff members from 6 cooperative farms, counties, and MoA. | Concerned staff member returned from International study tours. CTA and NPC – Facilitators. | Fully achieved  as per project target. |
| ii. Threshing/shelling techniques (50 participants per training) | 6 | 300 | Concerned staff members from 6 cooperative farms and counties, and cooperative farmers. | Concerned staff member returned from International study tour, National Consultant, NPC, and Chief Engineer - MoA. | Partially achieved  Participants decreased from 100 – 50 per training. |
| iii. Drying techniques (50 participants per training) | 6 | 300 | Concerned staff members from 6 cooperative farms and counties, and cooperative farmers. | Concerned staff member returned from International study tour, National Consultant, NPC, and Chief Engineer - MoA. | Partially achieved  Participants decreased from 100 – 50 per training. |
| iv. Storage (on-farm/household participants), 50 participants per training | 6 | 300 | Concerned staff members from 6 cooperative farms and counties, and cooperative farmers. | Concerned staff member returned from International study tour, National Consultant, NPC, and Chief Engineer - MoA. | Partially achieved  Participants decreased from 100 – 50 per training. |
| Planned training | | | | | |
| i. Workshop - End-of-Project | 1 | 30 | No. of participants decreased from 50-30. |  | Training pending  Not achieved as of March 2014 |
| ii. Survey workshop | 3 | 90 | No. of participants decreased from 50-30 |  | Training pending  Not achieved as of March 2014 |
| Awareness building on post-harvest management (50 participants/ farm/training) | 6 | 300 | No. of participants decreased from 100 to 50. |  | Training pending  Not achieved as of March 2014 |
| vi. Pre harvest observation (50 participants/ farm/training) | 6 | 300 | No. of participants decreased from 100 to 50 |  | Training pending  Not achieved as of March 2014 |
| vii. Handling of crops in the field (50 participants/  farm/training) | 6 | 300 | No. of participants decreased from 100 to 50 |  | Training pending  Not achieved as of March 2014 |
| viii. Transporting crops (50 participants/  farm/training) | 6 | 300 | No. of participants decreased from 100 to 50 |  | Training pending  Not achieved as of March 2014 |
| Rice milling techniques (50 participants/ farm/training) | 6 | 300 | No. of participants decreased from 100 to 50 |  | Training pending  Not achieved as of March 2014 |
| Pest infestation (50 participants/  farm/training) | 6 | 300 | No. of participants decreased from 100 to 50 |  | Training pending  Not achieved as of March 2014 |
| Study Tours | | | | | |
| Study tour for understanding postharvest handling of rice, maize, wheat and drying technology.  Duration: Jun. 25 – Jul. 13, 2012. | 1 | 5 | Members from the project farms, Pyongyang Agricultural Campus and concerned officers | Post-harvest Technology Center and Engineering Faculty in Kamphaengsaen Campus of Kasetsart University in Nakhonpathom Province, Thailand | Fully Achieved  as targeted |
| Study tour on agricultural engineering  Duration: Oct. 08 – 26, 2012 | 1 | 5 | Members from the project farms, Pyongyang Agricultural Campus and concerned officers | Sub-Institute of Agricultural Engineering and Post-Harvest Technology (SIAEP), Hochiminh City, Vietnam. | Fully Achieved  as targeted |
| Study tour on post-harvest handling of rice  Duration: May 06 – 24, 2013 | 1 | 5 | Members from the project farms, Pyongyang Agricultural Campus and concerned officers | Sub-Institute of Agricultural Engineering and Post-Harvest Technology (SIAEP), Hochiminh City, Vietnam. | Fully Achieved  as targeted |
| Study tour to review of all the demonstration farms, 30 Participants/ study tour, 3 farms in one group | 2 | 60 | -Increased participants from 35 to 60; and 1 group to 2 groups. |  | Not achieved  yet |

## 3.2.3. Extent of National Support and Commitment

According to the arrangements mutually agreed on in the two project documents the Government of the Democratic People´s Republic of Korea (DPRK) was to

* ensure the smooth implementation of the projects,
* allowing unhindered access to project sites and
* issue visas for persons visiting under the projects in a timely manner.

The project´s implementation was to furthermore benefit from DPRK Government coordination support through the National Coordination Committee (NCC), which was to provide

* guidance on policy matters, strategic priorities of the Government and
* appropriate supporting measures.

In addition, relevant government partners, including but not limited to the Ministry of Agriculture and the State Academy of Sciences and its relevant institutes and centers, were to provide

* technical and operational support to the programme,
* liaise with the authorities and stakeholders in the target provinces, counties and farm cooperatives, and
* actively contribute to the fulfilling of tasks by the Project Steering Committee (PSC) .

All stakeholders consulted as part of this evaluation confirmed that the two projects had indeed been receiving a high level of national support and commitment throughout the entire implementation period. Particularly strong operational support was reportedly received from the Ministry of Agriculture (MoA) at both, HQ and field levels. The total financial value of the MoA contributions, including logistics for training activities and the transportation of imported equipments to the individual beneficiary farms, was reportedly very significant. In addition, Ministry of Agriculture (MoA) officials also regularly participated in Technical Working Group (TWG) meetings along with representatives from the Academy of Agricultural Science (AAS) and the Pyongyang Agricultural University (PAU).

Two National Project Directors and a National Project Coordinator worked in close collaboration with the CTA for the overall implementation of project activities. They assisted the CTA in arranging Project Board meetings, the review of seed policies, the preparation of training modules and the nomination of trainees among other activities.

Several of the project cooperative farms made available on-site buildings and infrastructures to house the supplied equipments (including seed testing laboratory tools) and machineries in line with the in the project document stated Government contributions.

## 3.2.4. Preliminary Measures of Effectiveness At Demonstration Farms –

## Reduction of Post Harvest Losses

Being able to measure the concrete results of individual post harvest management and technology improvements is primordial for the role of demonstration farms. While the project foresees to carry out such a survey during the remainder of its implementation period and then compare results with recorded post harvest loss levels from the baseline study, preliminary partial data informally received during the evaluation field visits is an early indicator of the effectiveness of introduced changes.

Partial preliminary records received from the Jangsuwon farm management indicate for the 2013 rice cropping season combined post harvest losses of between 7 and 10%. This compares to recorded losses of 17 to 18% in the baseline study. Their 2013 records for maize show post harvest losses of between 7 and 8%, while the respective pre-project baseline indicates overall local losses of approximately 20%. The recorded time between harvest start and the end of threshing was reduced from 25 to 17 days, while the average duration of harvested crops remaining in the field (which is a major contributor to overall post-harvest losses) was brought down to 3 to 5 days from the previous level of between 4 to 7 days.

Preliminary data provided by the management of Pyongam farm shows a reduction from previously 40 to new only 15 days in the time span their harvested paddy remained in the field. Their 2013 production records show at the same time significant increases of 22 % (from 450 mt to 550 mt) for rice, 12.7% (from 1211 mt to 1365 mt) for maize and 25% (from 120 to 150 mt) for wheat and barley[[20]](#footnote-20).

At Soho demonstration farm, where the through the project introduced technology changes included among others also more efficient milling equipment, the management provided data indicating the following significant loss reductions in both quantitative and qualitative terms: increase in the rice milling rate from 65% (2011) to new 73% (2013); percentage of broken grain reduced from 40% (previous equipment) to 6% (new mill). Further gains were expressed through the recorded proxy indicator changes for “time span between harvest start and the end of threshing”, which showed a reduction from 55 days (2010 and 2011) to 40 days (2013) and “overall increase in paddy production by the farm[[21]](#footnote-21)” from 2260 mt (2011) to 2767 mt (2013).

Data provided by the Soho farm management furthermore showed that the observed increase in production resulted not only in gains for the farm as a whole, but also in direct benefits for individual cooperative farmers as they saw a 63% increase in the amount of paddy they received from 345 kg (2012) to 562 kg (2013). The way and degree to which cooperative farmers individually benefit from the achieved overall production gains of their cooperative varies considerably. A more detailed analysis would need to be undertaken by the project to measure this specific component of the overall, by project end achieved result.

The aspect is of particular interest as it strongly influences the degree to which the project will eventually contribute towards the in the project document stated following two UNSF outcomes

* Improved Nutritional Status of targeted populations to enable them to lead healthy lives, and
* Sustained Household Food Security

and the expected CP outcome

* Increased access of people to diversified range of foods as well as farmers increasing diversification and productivity

## 3.2.5. Preliminary Measures of Effectiveness At Demonstration Farms –

## Improved Seed Production

Unlike the “Reduction of Post Harvest Losses for Food Security” project, the “Improved Seed Production for Sustainable Agriculture” initiative did not undertake any scientific survey to establish baseline data on its three beneficiary cooperatives. Clearly measuring effectiveness at the farm level by project end will therefore be much more of a challenge.

The field visits undertaken as part of this evaluation nevertheless yielded some concrete preliminary data indicative of project effectiveness. Maekjon Foundation Seed Farm management records indicate that their production increased as followed since the beginning of the project:

* Rice seed production: increase by 40% since project start (as of 2013 harvest)
* Maize seed production: increase by 14.8% since project start (as of 2013 harvest)
* Wheat and barley seed production: increase by 10% since project start (as of 2013 harvest)
* Soya seed production: increase by 5% since project start (as of 2013)
* Vegetable seed production: increase by 10% since project start (as of 2013)[[22]](#footnote-22)

The preliminary partial data provided by Maekjon farm management furthermore showed quality improvements, expressed in

* a recorded 50% reduction of the external matter content in seed from 4 to 2%,
* a reduction of the average moisture content from above 15% to between 12 and 14%, and
* an increase in seed purity from 98 to 99%

It should be noted that project results are at this stage only partial, as additional gains are expected following the delivery of remaining inputs (including meanwhile provided but so far un-used rice transplanters, the yet to be finished construction of greenhouses and the still pending installation of a dehumidifier and air-conditioning equipment in the seed storage building).

Similarly, preliminary partial data provided by the management of Up Seed Multiplication Farm (which is one of only six specialty certified seed production farms in DPRK focusing mainly on vegetable seed production and covering the vegetable seed production needs of 3 provinces) shows since project start:

* a spinach seed yield increase by 14.3% (from 700 to 800 kg/ha as of 2013),
* a radish seed yield increase by 10% (from 500 to 550 kg/ha),
* a cabbage seed yield increase by 8.3% (from 600 to 650 kg/ha),
* a pumkin seed yield increase by 20% (from 100 to 120 kg/ha),
* a 50% reduction in the external matter content in produced seed from 4 to 2%,
* a reduction of the average moisture content in seed from 16 to 14%, and
* an increase in seed purity from 97 to 99%

The management teams of both of these farms stressed that these advances were only possible through the combination of the received capacity building (acquired through technical training sessions and study tours) as well as equipments and infrastructures.

## 3.3. Efficiency

Efficiency is generally defined as a measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results. Within this broad definition, efficiency in this evaluation is assessed from the perspective of cost-effectiveness; institutional capacity; complementarity and synergy; and cost-sharing arrangements.

Questions addressed under this heading include the following:

* Were objectives achieved on time? How timely were project inputs delivered?
* What measures were used to guarantee cost-efficiency, accountability and quality assurance in procurement and financial management?
* How was cost-efficiency in the implementation of activities ensured?
* Were project activities cost-efficient?

## 

## 3.3.1. Timeliness in Achievement of Project Objectives and Input Delivery

## Project Start-up

The planning and design of these two projects dates back to 2005 when original documents and budgets were drawn up. Both project documents were initially approved and signed in November 2006, but their implementation could not be started due to suspension of all UNDP programmes in DPR Korea in March 2007. Following recommendations from Member States the Executive Board approved the resumption of operations in the country in January 2009. In October 2009 UNDP resumed its programmes in DPRK.

During 2009 FAO carried out a project review, including budget adjustments to reflect changes in purchasing power. In line with Executive Board directives both the projects were reformulated and finally re-approved on 22 and 23 March 2011. These processes were reportedly characterized by lengthy internal agency negotiations on the future project implementation, project management and other contractual issues, which according to the UNDP mid-term project review resulted in a “delay of more than a year prior to the eventual project start-up in August 2011”. The in the re-approved Project Documents stated Start Date, End Date and Programme Period is March 2011, February 2014[[23]](#footnote-23) and 3 years. In addition to the respective project pocuments UNDP and FAO signed on 29 April and 5 May 2011 a Standard Letter of Agreement on the Implementation of UNDP Agriculture Projects in DPRK.

The vacancy announcement for the projects´ CTA post was issued on 9 June 2011. Interviews were held on 27 September and the selected CTA candidate eventually started his assignment in Pyongyang on 5 December, which is some 8 months after the projects re-approval date, approximately 7 months after the signing of the LoA between UNDP and FAO on the implementation of UNDP DPRK Agriculture Projects, close to 4 months after the fielding of a first FAO technical backstopping mission, and nearly three months after the projects´ inception workshop of 12 September 2011.

## Input Delivery In Terms of Budget Expenditure

Input delivery in terms of project budgets was as followed[[24]](#footnote-24):

“Improved Seed Production for Sustainable Agriculture” project:

* 2011: Effectively delivered US$ 27,025.39 (corresponding to 1.6% of the total 3-year-budget)
* 2012: US$ 842,508.80 (corresponding to 48.7% of the total 3-year-budget and 90.33% of the actual delivery target for the year 2012)
* 2013: US$ 426,784.05 (corresponding to 24.7% of the total 3-year-budget but only 75.3% of the actual delivery target for the year 2013).
* Total between April 2011 and 31 December 2013: US$ 1,296,318.24 (corresponding to 74.95 % of the total 3-year-budget)

“Reduction of Post Harvest Losses for Food Security” project:

* 2011: Effectively delivered US$ 47,951 (corresponding to 2.8% of the total 3-year-budget)
* 2012: US$ 758,501 (corresponding to 44.5% of the total 3-year-budget but only 78.5% of the actual delivery target for the year 2012).
* 2013: US$ 364,943 (corresponding to 21.4% of the total 3-year-budget but only 77.2% of the actual delivery target for the year 2013).
* Total between April 2011 and 31 December 2013: US$ 1,171,395 (corresponding to 68.67 % of the total 3-year-budget)

The observed under-expenditures versus targets in 2013 were linked to a number of challenges under which all United Nations agencies, including FAO and UNDP, operate in DPRK. These include, among others, limited procurement opportunities, restrictive banking services, delays in obtaining necessary clearances from exporting countries for goods procured for projects in the country, challenges in having equipments shipped into DPRK and difficulties in recruiting qualified staff members.

Particularly important in this respect were financial transaction problems, which seriously constrained all UN Agencies, including FAO, since April 2013[[25]](#footnote-25) and adversely affected normal activities and programme delivery of the country offices. In 2013, DPRK went through a tense political atmosphere after its missile launch and nuclear test, which led to the adoption of new UN sanctions. In addition, the European Union, followed by the United States, China and Russia, imposed additional trade and financial sanctions on the country. The financial sanctions by the US, particularly targeting the DPRK Foreign Trade Bank (which is the country’s main bank dealing with foreign exchange), affected fund flows and financial transfers to UN agencies operating in DPRK. Resulting financial difficulties (in particular cash availability in country) forced FAO to reduce activities as well as office operational costs and limited the procurement of inputs and development of farm infrastructures.

Following a temporary stabilization of the situation, financial transaction problems once again strongly re-surfaced in March/April 2014. To successfully conduct planned activities during the remaining project period FAO will require approximately USD 370 000 in project funds to become physically available in Pyongyang between April and October 2014. The issue therefore has the potential to negatively affect efficiency also during the remaining implementation period of the projects.

## 3.3.2. Cost-Efficiency, Accountability and Quality Assurance in Procurement and

## Financial Management

## Procurement Of Project Equipment And Other Deliverables

The arrangements agreed on in the two project documents state that FAO, as executing agency, was expected to follow its own rules and regulations for procurement activities under the evaluated projects and to ensure adequate mitigation of procurement risks. The Letter of Agreement between FAO and UNDP furthermore requires FAO to submit to UNDP within 30 days after 31 December an annual and final report of non-expendable equipment purchased by FAO for the assignment.

In addition, and bearing in mind the special regime under which the UNDP country office has to operate vis-à-vis asset acquisition and maintenance, the executing agency was to pay special attention to the following specific requirements for export licensing:

* The executing agency was to ensure that its contractors comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the terms of its contract and must obtain, at its own expense, any necessary export licenses for the machinery, equipment, and supplies procured by the agency and machinery, equipment, and supplies used for civil works under the project;
* The executing agency should provide the selected contractors with all the necessary information in order for the contractors to make export license applications in a timely manner;
* The executing agency should obtain from the contractors all licensing conditions attached to the term and strictly follow the licensing conditions;
* The executing agency should maintain the list of procured items and their location, and,
* The executing agency should advise UNDP of any changes to the procurement plan in a timely manner.

Above special requirements for export licensing, along with the very high costs of forwarding goods to DPRK, as well as sanction related limitations for procuring good quality equipment from reputed manufactures in Europe and other developed countries, clearly posed additional challenges for efficient procurement of project inputs in DPRK.

Applied FAO standard procurement procedures[[26]](#footnote-26) required FAO internal technical specification clearance by respective technical units for all project inputs, as well as respective approvals by the FAO Representative, Lead Technical Officer (LTO), and the Local Procurement Committee (LPC).

As per FAO rules its Finance Unit was not involved in the procurement process. Invitations to participate in tendering processes were issued by the Operations Unit. Offers were then reviewed by the Local Procurement Committee (LPC), which met on need basis and consisted of:

* Senior Field Programme Coordinator / Deputy FAOR – Chairman,
* Chief Technical Advisor (CTA), Seed and PHL Projects – Member,
* CTA – Food and Agricultural Information System (FAIS) Project - Member, and
* National Programme Officer – Member.

The following farm equipment and machinery was procured under the “Improved Seed Production for Sustainable Agriculture” project:

|  |  |  |  |
| --- | --- | --- | --- |
| Item Description | Specifications | Number of units planned | Number of units provided |
| Equipment and machineries provided prior to evaluation in March 2014 | | | |
| Tractor 75HP with Mould board plough, 3-furrows & Spring tine cultivator and Tripping trailer, 4 wheeled | Chinese make, 75 HP, Foton-754 | 3 | 3  = 100 % |
| Mobile Thresher | Vogal type; cylinder 30 cm and drum 50 cm; 9HP engine or elect. motor | 3 | 3  = 100 % |
| Corn Sheller | 0.5 mt Capacity /hr,3HP motor with aspirator | 3 | 3  = 100 % |
| Wet seed extractor | For fruit vegetables 0.5 mt capacity/hr | 3 | 3  = 100 % |
| Seed cleaner | 2 mt/hr Air screen cleaner | 3 | 3  = 100 % |
| Light truck, 2 ton capacity, FAW |  |  | 4 |
| Knap sac sprayers | 10 liter capacity | 9 | 9  = 100 % |
| Bag closers | Portable fishbone type | 3 | 3  = 100 % |
| 4 sets of laboratory equipment: one for Provincial seed inspection centre and three for three seed farms | Set (comprising germinator with light, blower, divider, top loading balance three digit, universal moisture meter, portable moisture meter, stand with lens, set of hand screens, refrigerator, petri-dishes, drier and seed divider) | 4 | 4 sets  = 100 % |
| Platform weighing scales | To weigh up to 100 kg. Avery or equal | 3 | 3  = 100 % |
| Fumigation covers | To fumigate up to 5 mt seed lots | 9 | 9  = 100% |
| Pallets (local make) | Made from plastic - local procurement | 100 | 100  = 100 % |
| Fibre drum to store breeder and foundation seeds |  |  | 100 |
| Water pumps to save seed plots from long dry spell |  |  | 5 |
| Rice Transplanter |  |  | 9 |
| Digital Grain Moisture Meter |  |  | 18 |
| Equipment and machineries to be provided after evaluation in March 2014 | | | |
| Dehumidifier for Seed Storage Building | Unidyn or Bry air cfm to be specified depending on insulation for 20 mt capacity stores-one at foundation seed farm | 1 | To be procured in 2014 |
| Industrial Air conditioner for Seed Storage Building | 5 mt capacity to cool up to 10 degree С for above locations. | 2 | To be procured in 2014 |
| Various small-scale, locally fabricated equipments (drum seed treater, simple seed cleaner, sheller, water pumps, etc) |  | Budget:  US$ 30,000 | To be procured in 2014:  US$ 16,593 |

Under the PHL project the following post harvest machinery/ equipment was procured and supplied to the six identified demonstration cooperative farms:

|  |  |  |  |
| --- | --- | --- | --- |
| Item Description | Specifications | Number of units initially planned | Number of units provided |
| Equipment and machineries provided prior to evaluation in March 2014 | | | |
| Tractor, 4 WD, 20 HP | YTO-200 | 6 | 6 =100% |
| Tripping Trailer, 4 wheeled |  | 6 | 6 =100% |
| Truck, 10 ton capacity |  | 6 | 6 =100% |
| Combine Harvester |  | 4 | 4 =100% |
| Corn Harvester |  | 1 | 1 =100% |
| Maize Sheller |  | 3 | **3** |
| Rice Milling Plant |  | 2 | 2 =100% |
| Moisture Meter |  | 6 (+ 36) | 42 |
| "Namnong” thresher |  | 8 | 8 =100% |
| Electric Transformer |  | 6 | 6 =100% |
| Polypropylene bags |  |  | 10,000 |
| Plastic Tarpaulin |  |  | 90 |

Overall expenditure for project equipment and other deliverables has mostly been made according to pre-approved limits under different budget groupings. In very few cases Project Board approval was requested to shift some resources between budget lines, for example to adjust the number of threshing yards.

The evaluation noted that the following issues to some degree negatively impacted on the efficiency of input delivery:

* Some trainings were postponed due to delays in the procurement of office and training equipment, including computers, printer, photocopier, LCD projector, etc.[[27]](#footnote-27)
* Technical specifications of the machines/inputs required in part multiple, time-consuming revisions and re-negotiations.

## Processes and Quality Assurances of Goods Received

FAO applied standard procedures to ensure that the goods it procured as part of implemented projects corresponded to pre-defined minimum quality standards and were in line with appropriate technical specifications. As part of these processes respective technical units within FAO approved minimum quality specifications of individual pieces of equipment and supported, where appropriate, the application of internal and external quality control mechanism[[28]](#footnote-28) upon delivery of goods.

Given the special circumstances influencing the availability, procurement and import of equipment as well as corresponding spare parts into DPRK, there were a number of important added challenges in this respect. Since reputed, more traditional international suppliers of farm equipment were largely unable to supply the required goods, much of the sourcing needed to instead be concentrated in China, which in turn led throughout the implementation period to frequent discussions on quality aspects[[29]](#footnote-29). The issue was for example again specifically highlighted in the 2nd Project Board meeting, when project staff was requested to take all precautions and measures to import machineries/equipments of acceptable quality while ensuring at the same time adequate maintenance and continued availability of spare parts. Being aware of the problems other donor-funded projects had faced in DPRK, particularly with agricultural equipment from Europe becoming rapidly unusable due to maintenance and repair issues but also with Chinese made equipment of sub-standard quality, the project tried to follow a balanced approach, aimed at maximizing overall sustainability and ensuring that the quality of procured equipment remained at least within acceptable limits.

## Quality And Quantity Of Infrastructures Constructed At Project Sites

The two evaluated projects provided the following infrastructures:

“Improved Seed Production for Sustainable Agriculture” project:

|  |  |  |  |
| --- | --- | --- | --- |
| Item Description | Specifications | Number of units planned | Number of units provided |
| Infrastructures provided prior to evaluation in March 2014 | | | |
| Threshing Yard | Each with a reinforced (20 cm thick) concrete floor of 1000 m2 surface and 400 m2 of roof (metal sheet) on welded metal beam construction | 8 | 8  = 100 % |
| Drying facility | 333 m2 reinforced concrete floor with sunlight transparent roofing (plastic / composite) on welded metal beam construction; Approved by second Project Board meeting thanks to savings from non-expendable items and trainings | 3 | 3  = 100 % |
| On-farm seed laboratory | The seed project established and equipped during 2012 three basic seed testing laboratories in pre-existing buildings on the selected seed farms. These laboratories should follow International Seed Testing Association (ISTA) procedure to test the seed samples. | 3 | 3  = 100 % |
| Foundation seed store building | Building construction with a capacity of 50 mt is finalized. Installation of ACs and dehumidifier is required for the store to become operational | 1 | 1  = 100 % |
| Infrastructures to be provided after evaluation in March / April 2014 | | | |
| Greenhouses | 12 greenhouses at 3 seed farms with a total allocated budget of US$ 207,000 started, but are yet to be finalized |  | Yet to be comple-ted |

“Reduction of Post Harvest Losses for Food Security” project:

|  |  |  |  |
| --- | --- | --- | --- |
| Item Description | Specifications | Number of units initially planned | Number of units provided |
| Infrastructures provided prior to evaluation in March 2014 | | | |
| Threshing Yard | Each with a reinforced concrete floor of 333 m2 surface | 7 + 6[[30]](#footnote-30) | 13 |
| Drying facility | Reinforced concrete floor with sunlight transparent roofing (plastic / composite) on welded metal beam construction; | 2 | 2  = 100 % |
| Corn Cob Crib | Improved replacements for pre-existing, commonly used, improperly designed and utilized corn cribs. Deteriorated, germinated, and moldy corn ears are found in significant proportions in these cribs. | 2 | 2 |
| Infrastructures to be provided after evaluation in March / April 2014 | | | |
| 3600 m2 of non-galvanized iron sheets for the construction of metal silos for grain storage at cooperative farms |  |  | Yet to be comple-ted |

Specifications of infrastructures had, prior to construction start and in line with standard FAO procedures, been reviewed and approved by respective FAO technical units at FAO HQ and/or the FAO Regional Office for Asia and the Pacific in Bangkok. A technical inspection of the constructed seed store and threshing yards had reportedly been undertaken through a specialized local construction surveyor upon finalization of works.

Rapid field assessments of infrastructure constructions, conducted as part of this evaluation, did not reveal any major qualitative shortcomings. However, the following issues were noted:

* At the Maekjon Foundation Seed Farm a several meter long vertical crack was visible on the side wall of the newly constructed foundation seed storage building. Project staff explained that the crack was in fact between the seed store wall and a protective building attachment that had been added subsequently. The evaluation recommended that the project arranges for the proper repair of the crack.
* The seed storage building will only become operational once the still missing pieces of equipment (dehumidifier and industrial air conditioners) are installed. The evaluation recommended that the procurement and installation of the remaining equipment takes place without further delay and that, as part of the process, the building is insulated appropriately to ensure an energy-efficient operation of the facility.
* At the time of the evaluation the construction of green houses at the three seed farms (with an allocated budget of US$ 207,000 for up to 20 greenhouses depending on size) had been on hold because of low temperatures and a lack of physical project cash within DPRK. The evaluation recommended that the project resumes and finalizes construction works on these greenhouses as a matter of priority.
* Three of the sunlight transparent roofing panels of the project´s drying facility at Jangsuwon Cooperative Farm were loose and at risk of further wind damage. The evaluation recommended that the roof is repaired before further damage occurs and that adequate future maintenance of all drying facilities supplied under the 2 projects is ensured.

## Implementation Efficiency and Transparency in Overall Financial Management

FAO applied standard procedures to ensure efficiency and transparency in executing the two evaluated projects whereby the overall implementation efficiency clearly benefited from the agency´s previous experience with seed and post harvest initiatives in numerous other countries within Asia, including through

* the capacity to rapidly field pre-identified, highly specialized and particularly well experienced international short-term experts,
* the possibility of using FAO´s existing, well developed international networks to organize specialized capacity building and efficient learning through study tours, technical seminars and field days,
* specialized technical knowledge for the procurement of appropriate seed and post harvest equipments and machinery,
* access to a large collection of pre-existing specialized training materials,
* access to a wealth of lessons learned during earlier implemented similar projects within the region,
* efficient technical backstopping through respective Lead Technical Units based at FAO headquarters and its Asia Pacific Regional Office, and,
* well developed long-standing relationships with various departments within the DPRK Ministry of Agriculture and other specialized institutions (FAO has been providing specialized technical support to the agriculture sector in DPRK for over three decades and executed during this period some 200 field projects valued at USD 64.4 million).

The two evaluated projects, “Improved Seed Production for Sustainable Agriculture” and “Reduction of Post Harvest Losses for Food Security”, are managed by the same Chief Technical Advisor (CTA), whereby each of the projects finances the CTA for 18 months. This arrangement clearly benefited the overall management efficiency as a large number of activities, including field visits, meetings and reporting, could be combined for both projects.

In terms of financial management FAO was obliged to submit timely quarterly Financial Reports through project delivery reports (PDR) to UNDP NY[[31]](#footnote-31) and also provide estimates of expenditure for next advances. The signed Letter of Agreement between FAO and UNDP on the Implementation of UNDP Agriculture Projects in DPRK and the two Project Documents state that FAO is to produce financial reports (in standard UNDP expenditure format) for 31 March, 30 June, 30 September and 31 December and submit them “to UNDP HQ and the UNDP Resident Representative within 30 days following those dates”[[32]](#footnote-32). In addition, FAO needs to annually submit certified statements of accounts showing the status of funds provided to it by UNDP, and to maintain separate accounts, records and supporting documentation. The evaluation noted that there had been delays in the submission of the required FAO financial reports to UNDP.

## Availability of Funds as Compared to Budget

Upon signature of a Letter of Agreement by UNDP and FAO on 29 April and 5 May 2011, and pursuant to project budgets and work plans, UNDP made advance payments directly to FAO HQ according to UNDP HQ Project Clearing Account Mechanisms.

Funds received by FAO HQ for the “Improved Seed Production for Sustainable Agriculture” (Seed) project amount to US$ 1 729 355, which corresponds to the total of project budget components for FAO as listed in the Project Document[[33]](#footnote-33). Total allocated resources for the Seed project as stated in the Project Document, including budgeted UNDP expenditures under this project, are US$ 1 822 455.

Funds received by FAO HQ for the “Reduction of Post Harvest Losses for Food Security” (PHL) project amount to US$ 1 705 548, which corresponds to 99.998% of total project budget components for FAO (US$ 1 705 586) as listed in the Project Document[[34]](#footnote-34). Total allocated resources for the PHL project as stated in the Project Document, including budgeted UNDP expenditures under this project, are US$ 1 798 686.

Significant portions of the above budgets are for

* the procurement of equipment (38% of the total PHL project FAO budget, respectively 18% of the Seed project budget),
* contracts (31% of the total Seed project FAO budget, respectively 9.4% of the PHL project budget), and,
* training (12.4% of the total Seed project FAO budget, respectively 11% of the PHL project budget).

During 2009, prior to the project start-up in August 2011, FAO reviewed and to some degree adjusted certain budget components to reflect inflation and other cost increases since the original financial budget was drawn up in 2005. However, further significant cost increases were reported since then, which in part led to a growing discrepancy between initially budgeted and effective prices for some inputs, particularly for equipments and for contracts to construct infrastructures. To overcome the problem the Project Board endorsed proposals to adjust, where necessary, the number of equipments and infrastructures to be supplied under the two projects.

## 3.3.3. Cost Efficiency of Seed and Post Harvest Management Programming in General

Seed sector development is widely seen as one of the cheapest means to increase total food production, to improve productivity and to strengthen food and nutrition security at the household level, requiring relatively modest efforts for putting existing production means, facilities and infrastructures into proper use. Experience shows that (quantitative) seed production increases of 20 to 30% are, under the given circumstances, relatively easily achievable within a three year period. Even greater, longer term returns on investment can be expected through qualitative advances, particularly where seed quality levels are to a large degree yet very far from international standards.

Only between 10 to 15% of seed produced in the three beneficiary cooperatives met international quality standards prior to the start of the project. Doubling that figure to between 20 and 25% as a direct result of this type of assistance is a very realistic initial target from where benefits can then be further up-scaled during additional programme phases. With a conservatively estimated potential of a 10 to 30% higher harvest resulting from the use of better seed, the broader benefits are obvious.

Improved post-harvest management offers similarly interesting potentialities in the context of the conditions currently prevailing in DPRK. The baseline study undertaken by the project in collaboration with the Pyongyang Agricultural Campus (PAC) of the Kim Il Sung University provides for the first time detailed, scientifically-based evidence of the scale of contributing loss factors within the post harvest system of key food crops in DPRK. Overall they amount to 15.56% in rice, 16.65% in maize and 16.35% in wheat and barley. Being able to credibly demonstrate how such dramatic loss levels can be successfully cut in half through relatively simple, cost-effective interventions, is a very efficient mean to significantly improve food security, particularly when the experiences of the pilot cooperatives are replicated at the national level.

## 3.4. Management

Unlike “Relevance”, “Effectiveness”, “Efficiency”, “Impact” and “Sustainability”, “Management” is in itself not a criteria that is typically separately used in UNDP evaluations due to the close links with efficiency and effectiveness. In this evaluation the following issues are assessed under the Management heading:

* Adequacy of monitoring and reporting
* Adequacy of reports submitted by FAO to UNDP
* Quality and quantity of administrative and technical support by FAO
* Level of Project Board involvement

## 3.4.1. Adequacy Of Monitoring and Reporting

UNDP DPRK´s overall monitoring and evaluation plan foresees that quarterly (or bi-annual[[35]](#footnote-35)) and annual reports are prepared, field visits are conducted, issue and risk logs are recorded in Atlas and monitoring schedules are established. In line with applicable UNDP Programme and Operations Policies and Procedures, Project Managers / CTAs are required to agree in advance with the Project Board on the exact progress reporting format and frequency.

Both evaluated projects contain, as part of the respective project documents, specific Monitoring Frameworks with detailed descriptions of individual M&E activities to be carried out, their frequency and timing, the specific aspects to be monitored or evaluated, the officer in charge of each M&E activity, and, the required approvals.

M&E activities listed in the Frameworks are:

-Production of detailed Quarterly Work Plans[[36]](#footnote-36)

-Production of Annual Work Plans and budget

-Production of Quarterly Progress Reports[[37]](#footnote-37)

-Activation and regular updating of Activity, Issue and Risk Logs in Atlas

-Production of Annual Progress Reports

-Mid-Term evaluation

-Production of mission and other reports and deliverables

-Production of Project Board meeting minutes

-Production of regular financial reports and project resource data tracking inputs into Atlas system

-Production of a Terminal Report

-Production of an End of Project Evaluation Report

Not specifically listed in respective project Monitoring Frameworks was the production of Monitoring Schedule Plans.

In its 2013 Audit of the UNDP Country Office in DPRK the UNDP Office of Audit and Investigations (OAI) identified “weaknesses in project monitoring”[[38]](#footnote-38) as a priority issue. Related OAI recommendations were subsequently addressed by respective agency staff. Starting from October 2013 the CTA produced and submitted to UNDP Quarterly Monitoring Schedule Plans containing specific dates and locations of upcoming monitoring and evaluation visits[[39]](#footnote-39). UNDP staff was invited to join these visits as UNDP DPRK´s overall monitoring and evaluation plan requires the Programme Specialist (Senior Programme Advisor) to conduct project site visits every quarter and regularly update Activity, Issue and Risk Logs in Atlas[[40]](#footnote-40).

Reviewed Quarterly Monitoring Schedule Plans for the time period between October 2013 and March 2014 foresaw CTA visits to each project site taking place between 1 and 3 times per quarter with a clearly lower frequency during the last 3 months of 2013 (5 out of the 9 beneficiary sites under the two projects were only visited a single time during that quarter). The evaluation also noted that up to 3 farms were visited during a single day, which means that the actually available time for in-depth discussions with members of the management teams and individual cooperative farmers at the different beneficiary farms was in part rather limited.

Although labeled as monitoring visits, some of these CTA field trips were actually used to at least partly carry out or follow-up on other regular day-to-day CTA tasks at respective beneficiary locations. If this was the case, and provided that the duration of such field trips did not exceed a single day, the CTA did not produce a written monitoring report / BTOR[[41]](#footnote-41). For multi-day field visits with a main focus on M&E the CTA did produce internal monitoring reports / BTORs and submitted them to UNDP.

Reviewed FAO CTA project field monitoring reports / BTORs were generally produced within some two weeks of the field visits and contained essential information with regard to participating mission members, visited locations and monitoring activities carried out. They also contained a short summary and a section with major observations. Some of these reports would have however benefited from a higher degree of specificity (including for example location-specific figures to quantify preliminary results/productivity improvements so far achieved thanks to the projects or more detailed records of identified concerns or needs, such as expressed spare part requirements in individual locations). Adjustments in the visiting schedule may need to be considered if the amount of time spent in each location was a key limiting factor for greater specificity in such reports.

The UNDP OAI audit also underlined that “Annual Progress Reports only contained completed activities, making it difficult to assess whether projects were on track toward achieving intended outputs. This occurred because the project annual work plans did not contain annual targets, which would provide the basis for assessing and reporting on project progress”. In reaction to this observation, the PB requested in December 2013 that two columns, namely ‘target quantity’ and ‘remarks’ were added in the projects´ Annual Work Plans for 2014 to facilitate future M&E tasks. While these efforts did result in an improvement of AWPs for 2014, there is room to further strengthen those and other documents by systematically applying the SMART[[42]](#footnote-42) (Specific, Measurable, Achievable, Relevant or Results-Oriented, Time-bound) concept and principles in defining and identifying targets and indicators.

The “Reduction of Post Harvest Losses for Food Security” (PHL) project document states that “the performance of demonstration farms will be carefully monitored by county officials who will be responsible for reporting results to the Ministry of Agriculture and the PHMPU” and that “based on these field results, adjustments will be proposed, implemented and again tested”. This particular component of the overall monitoring efforts has not been sufficiently well reflected in the so far existing documentation and needs to receive far greater attention during the remaining project period. The early closure of a in parallel implemented UNDP/FAO project “Strengthening capacity for the improvement of Food and Agriculture Information System (Agricultural Databank)” in 2013 negatively affected the availability and reliability of relevant PHL data, as the project was to “provide inputs on baseline information and monitor post harvest loss on the demonstration and neighboring farms”.

Apart from the very important baseline survey on the different types of pre-intervention post harvest loss levels on six cooperative farms[[43]](#footnote-43), the two projects have made so far relatively little independently verifiable data available that helps to document achievements. Being designed as pilot interventions, the overall success of the two projects depends to a large degree on their ability to measure the achieved benefits of better post harvest management and improved seed systems and disseminate those findings, along with resulting recommendations, to a wider public. Substantial amounts of additional primary PHL data will need to be collected and processed during the upcoming cropping season.

The “Improved Seed Production for Sustainable Agriculture” project regrettably didn´t establish any similar kind of baseline[[44]](#footnote-44). Some preliminary statistics that are indicative of project achievements were received during the evaluation field visits (see 4.2.5.), but more systematic efforts will be required to consolidate the available information from the management of beneficiary seed farm cooperatives and the Ministry of Agriculture for assessing final project results.

## 3.4.2. Adequacy Of Reports Submitted By FAO to UNDP

FAO submitted between December 2011 and the time of this evaluation in March/April 2014 the following regular project (progress) reports to UNDP:

* Six Monthly Report (January – June 2012), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564, Bir C. Mandal, Chief Technical Advisor, July 2012 (Report includes Executive Summary, Introduction, Major Activities Carried Out By the Project, Observations and Suggestions, Budget and Expenditure Summary Data, etc. on totally 18 pages including Annexes)
* Project Progress Report (January – December 2012), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564, (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, Follow-up Actions on totally 11 pages)
* Six Monthly Report (January – June 2013), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564, Bir C. Mandal, Chief Technical Advisor, July 2013 (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, Follow-up Actions and the 2013 Annual Work Plan on totally 27 pages including Annexes)
* Annual Report (January – December 2013), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564, Bir C. Mandal, Chief Technical Advisor (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, Follow-up Actions and the 2014 Annual Work Plan on totally 27 pages including Annex)
* Six Monthly Report (January – June 2012), Reduction of Post Harvest Losses for Food Security, FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554, Bir C. Mandal, Chief Technical Advisor, July 2012 (Report includes Executive Summary, Introduction, Major Activities Carried Out By the Project, Observations and Suggestions, Budget and Expenditure Summary Data, etc. on totally 19 pages including Annexes)
* Project Progress Report (January – December 2012), Reduction of Post Harvest Losses for Food Security, FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554, (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, as well as Follow-up Actions on totally 11 pages)
* Six Monthly Report (January – June 2013), Reduction of Post Harvest Losses for Food Security, FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554, Bir C. Mandal, Chief Technical Advisor, July 2013 (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, Follow-up Actions and the 2013 Annual Work Plan on totally 24 pages including Annexes)
* Annual Report (January – December 2013), Reduction of Post Harvest Losses for Food Security, FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554, Bir C. Mandal, Chief Technical Advisor, January 2014, (Report includes Overview, Progress Reporting, Key Achievements and Problems encountered, Follow-up Actions and the 2014 Annual Work Plan on totally 29 pages including Annexes).

While the above documents did provide the required essential updates, the evaluation noted that some of those reports would have further gained in value through the provision of more specific information and the wider use of figures in documenting achieved progress.

## 3.4.3. Quality And Quantity Of Administrative And Technical Support By FAO

Technical and administrative support to the project was provided by the projects´ Pyongyang- based Chief Technical Adviser (CTA), the Senior Plant Production as well as the Senior Agro-Industry and Post-harvest Officer at FAO’s Regional Office for Asia and the Pacific (FAO- RAP) in Bangkok, the FAO Representative´s Office for China, DPRK and Mongolia, the Technical Cooperation Department at FAO HQ Rome and a total of seven, well qualified, short-term, international FAO consultants[[45]](#footnote-45). FAO quality assessments described the work of six out the seven fielded consultants as “very satisfactory”, while the remaining consultant was rated as “satisfactory”.

The Beijing based FAO Representative (FAOR) for China, DPRK and Mongolia is the budget holder of the two evaluated projects and also the overall managerial and administrative supervisor[[46]](#footnote-46) of the CTA. This reporting line (CTA directly to FAOR) remained unchanged also after a Pyongyang based Deputy FAOR was appointed in 2013. The Resource Partner, UNDP, saw this physical distance between their Pyongyang Representation and the office of the Budget Holder in Beijing at times as a disadvantage, particularly when having to rapidly solve unexpected administrative issues. Similarly, UNDP saw the absence of a (matrix management) reporting line of the FAO CTA to the UNDP CO as a disadvantage.

Technical CTA supervision and support was assured by respective Lead Technical Officers at FAO’s Regional Office for Asia and the Pacific (FAO-RAP) in Bangkok, with whom the CTA maintained throughout the entire project implementation period regular consultations via face-to-face and teleconference discussions. Each of the two Lead Technical Officers (FAO-RAP Senior Plant Production Officer for the Seed project; FAO-RAP Senior Agro-Industry and Post-harvest Officer for the PHL project), undertook a total three technical backstopping missions to DPRK in support of respective project activities.

The FAO Representation provided the two projects furthermore with office infrastructure and partial HR support by an Administrative Clerk (beyond the 2 person years budgeted under the 2 projects).

## 3.4.4. Level Of Project Board Involvement

The Project Documents contains detailed Terms of Reference for the Project Board (PB). The conducting of “regular meetings to review the Project Quarterly Progress Reports” and “authorizing of next quarterly plans” are among the specific PB responsibilities listed in these ToR. The Monitoring Frameworks attached to respective Project Documents indicate the frequency of Project Board meetings as “every three months or as determined by body”, which is consistent with the described schedule of having among others “detailed quarterly work plans” and “quarterly progress reports” approved by the Project Board. The Section on Management Arrangements in the PHL project document on the other hand stipulates that “the PB will meet every six months (or as shall be determined by the body)”.

Effectively conducted were however so far only 3 combined Project Board meetings for both evaluated projects on 20 June 2012, 26 June 2013 and 5 December 2013. Despite a request made by the PB chair to have future PB meetings convened every quarter, more than 12 months passed between the 1st and 2nd PB meeting. Following that, and in reaction to a proposed change to a bi-annual meeting frequency, the time between the 2nd and 3rd PB meeting was reduced to 5 ½ months.

The OAI audit carried out in February and March 2013 specifically elaborated on the timing of PB meetings, while highlighting at the same time it´s view that there needs to be a consensus on the frequency of the Project Steering Committee / Project Board meetings, as required in the UNDP Programme and Operations Policies and Procedures.

According to the above project Monitoring Frameworks the PB was also meant to approve numerous other M&E activities and reports, including:

- Annual work plans and budgets,

-Annual progress reports,

-the Mid-term evaluation,

-Mission and other reports, and

-Project Board meeting minutes.

Activities listed in the 2014 Annual Work Plan were on 5 December 2013 approved during the 3rd PB meeting. With earlier meetings having taken place on 20 June 2012 and 26 June 2013, the PB would have however been unable to approve the 2012 and 2013 Annual Work Plans prior to the start of respective implementing periods. In addition, respective PB meeting minutes did not indicate that the PB did indeed explicitly approve any of the other above listed reports/activities.

The PB has, on the other hand, been efficient in analyzing and reacting to expressed changes with regard to priorities for input delivery and agreeing on related proposed modifications in budget components. The second project board meeting for example agreed to shift significant resources from the expendables and training budget sub-headings of the PHL project to allow the previously unforeseen printing of a study on post harvest losses, the construction of additional threshing yards and the procurement of equipment to reduce down-time of electric threshers and rice mills. Similarly, the 2nd PB meeting also green-lighted a shift of resources from training and non-expendable budget headings to the construction of additional simple drying facilities.

The 3rd PB meeting announced that a no-cost extension of the implementation period for both projects until 31 October 2014 had been agreed on with UNDP.

## 3.4.5. Post Harvest Loss Project Technical Working Group

As stipulated in the “Reduction of Post harvest Losses for Food Security” project document a Technical Working Group (TWG) was established as part of the overall project management system. The main purpose of this TWG was its role as an inter-agency coordination mechanism between the Postharvest Management Project Unit (PHMPU) and all concerned Government counterpart agencies, including the Ministry of Agriculture (MoA), the Academy of Agricultural Science (AAS) and the Pyongyang Agricultural University (PAU). In addition, the Technical Working Group was to facilitate the training of national Master Trainers in post harvest management. According to the Chief Technical Advisor the group continued to meet throughout the project period on a needs basis, normally 2 to 4 times a month, at either the Haibangsan Hotel in Pyongyang or on a nearby cooperative farm. In line with the purpose and technical nature of the TWG, the discussions were kept informal, which also meant that there was no recording of meeting minutes. Activities carried out by the TWG included the provision of planning support for the prioritization of field activities at individual project sites, technical discussions for the definition of input specifications, the identification and addressing of project related technical constraints and the solving of any implementation related practical issues including logistics problems.

## 3.5. Impact

Impact is generally understood as the positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. This evaluation focuses on the main impacts and effects resulting from the activity as far as already assessable at this stage.

It is expected that the two projects will contribute importantly to an increased access of people to a diversified range of food, including cereals and vegetables, as well as greater incentives for cooperative farmers and improved productivity in these Cooperatives. The so far achieved, preliminary average increase in seed production at three cooperative farms under the Seed project has been estimated as 20-25% since project start; although, this is yet to be independently verified. Preliminary MoA records of qualitative improvements indicate that the percentage of seed passing international quality standards increased from 13 to 20%.

With important outputs still to be delivered during the remaining duration of the projects, outcome level changes in DPRK as a result of the interventions may not be fully evident yet. However, capacity building efforts undertaken along with the introduction of improved technology have now started to yield concrete results in terms of increased food production and fewer harvest losses.

Thanks to the establishment of comprehensive baseline data, the project will during the upcoming 2014 cropping season be able to clearly and accurately measure the as a result of the intervention achieved post harvest loss reductions for each step in the harvesting process of every crop on all six demonstration farms. The stated aim is an overall reduction of losses by some 50% from the recorded pre-intervention total loss levels of 15.56% in rice, 16.65% in maize and 16.35% in wheat and barley. Key contributions to these changes are expected to be resulting from the use of the through the project supplied infrastructures and equipments, including threshing yards, threshers, harvesters and two complete rice milling plants.

A total of 6,804 cooperative farmers are expected to directly benefit from the achieved results on the six demonstration farms under the PHL project, while the project´s three seed farms consist of 3,612 cooperative farmers.

## 3.6. Sustainability

Sustainability refers to the continuation of benefits from a development intervention after major development assistance has been completed, including the probability of continued long-term benefits. A special focus in this evaluation is on equipment maintenance and repair and the planning of replicating or up-scaling achievements from the current demonstration farms.

To reinforce sustainability of the projects at their conclusion, the interventions have been aiming for a continual skills and knowledge transfer during the entire implementation period. This process is still ongoing with important elements of it, including farmer field days as well as numerous specialized trainings, yet to be organized.

A total of 300 farmers each are still scheduled to be trained on

* post-harvest management,
* pre harvest observation,
* handling of crops in the field,
* transporting crops,
* rice milling techniques, and
* pest infestation, in addition to upcoming workshops on
* carrying out post harvest loss surveys and the
* use of seed testing equipment.

In addition, there are plans to organize

* two study tours to review all six demonstration farms and
* farmer field days at 10 locations during which approximately 500 participants will be able to inspect the benefits of improved seed of rice, maize, wheat, vegetable and soybean varieties thanks to specially established demonstration plots.

Work is currently underway to delineate and update a sustainability strategy which is meant

* to provide appropriate policy proposals for government consideration,
* to be used for the mitigation of sustainability issues linked to potential project weaknesses,
* to help with the planning of possible future replication and up-scaling of activities within a larger geographic area, and
* to be incorporated in the projects´ final reports,

A specific area of potential concern for sustainability is the maintenance and repair of equipment that has been supplied through the projects. The evaluation noted that only very few spare parts had been provided along with the imported machinery and equipments. Since these are not readily available in the provinces or even the capital, some equipment risks becoming unusable during critical times of the season if sudden technical problems occur that can´t be simply repaired without new parts. Even relatively simple things, such as the replacement of tires, could potentially become an issue as the wheel sizes of the Chinese equipment are different from the once commonly available in DPRK.

Two international project consultants trained the mechanics who are in charge of maintaining and servicing the supplied equipments, but there are currently no plans for the provision of any refresher training. Similarly, there are at this stage no clear plans on how the projects intend to ensure refresher trainings to maintain the acquired knowledge levels in seed and post harvest management.

# Section 4:

# Lessons Learned, Conclusions And Recommendations

## 4.1. Lessons Learned

The remaining implementation period of the two projects is seen as particularly important for lesson learning. The following list of lessons learned is therefore only meant as an initial starting point for these efforts. Given the pilot character of the evaluated interventions, additional efforts will be required during the following six months to adequately capture lessons learned in a comprehensive manner.

* The implementation of the project activities needed substantially more time than anticipated, this in part due to the DPRK specific circumstances regarding procurement, including the difficulties caused by constrained transfers of funds into the country.
* Project cycles should be of sufficient duration to provide enough time for building a solid base that will allow projects to work successfully with low resource communities. A longer term focus of seed and post harvest programming was found to increase the likelihood of sustainable results under the prevailing conditions in DPRK.
* Best practices training should at the same time be supported by matching appropriate infrastructure development and technology improvements. Matching the facilities (cost, size, scope) to local needs and management capabilities is essential, as is the delivery of practical training to ensure that the infrastructure is properly utilized, managed and maintained.
* Given the prevailing conditions at the post harvest project demonstration cooperatives, higher than initially anticipated investments in improved machinery and equipments were needed. This meant that the originally planned budget level for this component was found to have been somewhat too low. In the initial budget planning there should have furthermore been some additional room for other unspecified expenditures for expendables and non-expendables, including for a small number of pumps or small quantities of fertilizer and imported seed.
* Avoid over-building – large facilities are very difficult to manage and can be too costly to be profitable. Strengthening of support services (local post harvest equipment suppliers, repair services, engineers) is an important element for the success of project activities.

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* Improved practices were more easily adopted if they fit well into an existing value chain (representing small steps of improvement rather than requiring huge changes).
* Training of master trainers proved to be an efficient approach under the prevailing conditions in DPRK.

## 4.2. Conclusions

Well designed and executed development assistance in support of improved seed and post harvest management has the potential to make a very significant difference in the quest towards achieving sustainable food and nutrition security for the people of the Democratic People´s Republic of Korea.

The country´s national food balance sheet indicates that the domestic food supply is 340,000 mt below the anticipated demand during the 2013/2014 marketing year. Given an estimated domestic staple food production of 5.04 million mt, the deficit is important, but nevertheless not at a level that would make it impossible to reach self-sufficiency. Reaching the national self-sufficiency goal in the DPRK is however contingent to productivity increases as the available cropping area can´t be expanded much further.

Better quality seed of improved varieties, made available in sufficient quantities, allows cooperative farmers to produce on the same surface significantly increased amounts of staple food crops with a similar level of inputs. Innovation in seed breeding and multiplication is therefore a clear sectoral priority in DPRK, along with better farming techniques as well as policies to boost double cropping and improvements in potato and soybean farming.

The “Improved Seed Production for Sustainable Agriculture” project concentrated its support to the seed sector in DPRK via three seed farms that produce seed of both, staple food and vegetable crops. Project outputs are a combination of capacity building efforts and the introduction of improved equipments, which are expected to result in quantitative as well as qualitative advances of the seed production. The delivery of outputs is ongoing. Full project benefits will therefore only be realized during the current season.

Another way of increasing the amount of available food lies in the reduction of production losses. In DPRK current post harvest losses are on average well above 15%, which is high and offers therefore potential for rapid gains. Preliminary figures, recorded on one of the six demonstration farms benefiting from the evaluated “Reduction of Post Harvest Losses for Food Security” project, show that a 50% reduction of such losses to around 7.5% is clearly within reach.

The success of the Post Harvest initiative by project end depends on the extent to which post harvest losses are reduced, but even more importantly, on how well it will have demonstrated the most cost-effective methods of reducing these losses. Much of the work to reach this goal is still ahead, as related key project activities are yet to be fully implemented. The remaining time until the project end date (an extension until 31 October 2014 has been granted during the last PB meeting) is therefore crucially important.

Evaluation findings show that both projects progressed in general satisfactorily towards the delivery of the planned outputs despite the recorded delays during start-up and parts of 2013, when financial transaction problems forced the project to put certain activities temporarily on hold. Challenges, in part caused by weaknesses in project design and the limited availability of data, are mainly related to monitoring and reporting. This area requires significant additional attention during the remaining implementation period, along with the need to urgently update the sustainability strategy.

## 4.3. Recommendations

## 4.3.1. Operational Recommendations For The Remaining Implementation Period

* The overall success of the two evaluated projects depends on the extent to which post harvest losses are reduced and seed production is improved, but even more importantly, on how well the interventions will have demonstrated the most cost-effective methods for reducing these losses and strengthening seed management. In order to do so, the projects´ ability to carefully measure and document field results and achieved improvements is essential, as, based on these field results, potential adjustments need to be made, which must then be tested again. This particular component of the overall project implementation process requires significant strengthening during the remaining project duration, as substantial amounts of additional data will need to be collected and processed.
* It is therefore recommended that adequate additional efforts in data collection, recording / processing of field results and related reporting are initiated soonest possible, in order to ensure that firm statements with regard to the viability of the piloted technologies and management practices, as well as their suitability in different environments, can be made prior to the project end. A very intense collaboration with the MoA, PAC, the county authorities and management teams of beneficiary cooperative farms will be essential in the process.
* Another, in parallel implemented, UNDP/FAO “Strengthening Capacity for the Improvement of Food and Agriculture Information System (Agricultural Databank)” initiative was supposed to provide inputs on baseline information and assess / monitor post harvest loss (PHL) on the demonstration and neighboring farms. The early closure of this Agricultural Databank initiative in 2013 certainly had a negative effect on the other projects´ current capacity to generate, analyze and disseminate key productivity, production and PHL data. In view of this and given the intensity of additionally required PHL assessment efforts ahead, it is recommended that the PB considers re-allocating some of the remaining budgetary resources for temporary external project support by a qualified expert in this specific domain. If approved in principal, detailed planning of such external support will be of great importance, as the timing of expected contributions would need to be carefully aligned with the already scheduled follow-up field survey that will compare the 2014 season post-harvest losses on the six demonstration farms with the earlier established baseline data.
* Much of that already scheduled follow-up survey work will in fact be done rather late for being published prior to 31 October 2014. The possibility of having certain, limited activities still taking place after the current project end date should therefore not be fully excluded. A project phasing down period could be defined for this purpose.
* Findings from the upcoming comparative analysis of the on the six demonstration farms introduced measures for improved post harvest management and resulting recommendations on reducing PHL on farms in DPRK should be compiled, published (in the form of extension materials in Korean language), and made available to county officers and cooperative farms. The translation of other by the two projects produced English language training material and handouts into Korean language should be considered.
* Given the limited remaining duration of the projects, the updating of the sustainability strategy should be undertaken as early as possible.
* As part of this strategy authorities should continue to train farmers in post-harvest practices by building this into their established extension programmes.
* The project should consider procuring of a limited additional stock of essential spare parts for all imported project equipments. These spare parts should then be centrally stored by the Agricultural Mechanization Department in the MoA, from where they could be rapidly delivered to the beneficiary cooperatives in case of need. Ideally, the Agricultural Mechanization Department in the MoA would also
* put system in place that ensures a continued replacement of used spare part stocks,
* organize continued refresher training for the engineers that are in charge of maintaining respective equipments, and
* oversee the proper updating of maintenance log sheets in each beneficiary farm.

## 4.3.2. Recommendations In Relation To Potential Additional Assistance For Future Seed and Post Harvest Sector Programming

* Further, well targeted investments for the development of the seed sector and the reduction of post harvest losses in DPRK are recommended. They should closely build on the experiences gained through the two evaluated projects, seek to consolidate achievements in the seed and PHL sectors and focus particularly on the up-scaling of proven results from the current demonstration cooperatives. A careful balance of efforts to strengthen local capacities, including farm management skills and awareness of modern agricultural practices, along with a matching level of cost-effective technology and infrastructure improvements that result in sustainable, locally adapted solutions for enhanced efficiency and productivity of rural production systems have the greatest potential of improving food security in DPRK.
* One particular focus in future seed sector programming would need to be on further seed quality improvements to fully reach international quality standards. It is recommended that potential future project phases or projects in support of the seed sector furthermore consider including the testing of high-cold-tolerant winter wheat varieties (such as those grown under similar conditions in China), as they could help revitalize the country´s double cropping programme. Other double cropping system related benefits could potentially be obtained through the introduction of short duration, photo insensitive and cold tolerant hybrid varieties of maize, which could be used in combination with wheat and barley. Programming support to strengthen breeder seed production and to make reasonable priced hybrid rice and hybrid vegetable seed of superior cultivars available in larger quantities are seen as other priorities as these could have a very high multiplier and associated knock-on effects.
* In supporting further post harvest related programming substantial additional benefits are for example possible through an even wider use of threshing -cum- seed drying floors, combined harvesters, mobile threshers, maize shellers and improved crop storage, whereby the sustainability of the adoption of technological innovations is primarily dependent upon their profitability in the local setting. A broader targeting from cooperative to county or province level could be considered. Commonly used local standards (for example with regards to wheel sizes or engine tolerance against fuel contamination) should, if possible, be given preference when selecting imported equipments to be procured under potential future project phases.
* Empowering local cooperative farms, work team leaders and cooperative farmers through capacity building also improves the chances of sustainability. Accompanying administrative measures and incentives that encourage cooperative farmers to take greater responsibility for their crops (including after harvest) should, in view of likely resulting additional efficiency gains, be considered when planning potential additional project phases.
* It is critical to foresee adequate financial and human resources to ensure effective and quality monitoring and evaluation at the planning stage of potential future projects or project phases. The resources for monitoring and evaluation should be considered within the overall costs of delivering the agreed results and not as additional costs. While it is important to plan for monitoring and evaluation together, resources for each function should be separate. In practice, a project should have two separate budget lines for its monitoring and evaluation agreed in advance among partners.
* The “Beneficiary Results Assessment”[[47]](#footnote-47) methodology has during the past several years been increasingly introduced to strengthen results-based monitoring and reporting of project achievements. Under the prevailing conditions in DPRK it would have definitely been of great value also for the two evaluated projects. Planners of potential future project phases should therefore consider using the tool in DPRK. Specific attention should furthermore be given to establish baselines and identify data gaps.
* Annual Work Plans (AWPs) of potential future project phases should systematically include annual output targets. As projects are implemented through AWPs, it is critical to set annual targets for outputs and clearly reflect on them in the AWPs for monitoring purposes at the end of the year. Agreed upon annual output targets in AWPs should also serve as reference points for performance monitoring in any existing national or corporate results management or outcome monitoring systems.
* All English language training materials and handouts produced during potential future project phases should also be translated into Korean language. Is recommended that future project budgets systematically include related expenditures.
* UNDP/FAO -PHL/SP project start-up was significantly delayed due to lengthy internal agency negotiations on the future project implementation, project management and other contractual issues. As a result, the UNDP DPRK Agriculture Sector Interventions Mid-Term Project Review recommended that UNDP should consider in the future whether “Directly Executed” projects by UNDP would be more effective and efficient both in terms of Project Management and Financial Control. Numerous agriculture related UNDP projects elsewhere have been successfully implemented under both, “Directly Executed” and “Agency (FAO) Executed” modus. Both options have advantages and disadvantages and during this evaluation expressed opinions on the subject by consulted stakeholders vary, not surprisingly, widely. The evaluation recommends that further direct discussions between the concerned agencies, namely UNDP, FAO, NCC and respective line ministries, take place prior to deciding on the most appropriate modality for a specific future project in the agriculture sector. While the potential benefits of UNDP direct execution may indeed be greater for certain projects, particularly in cases where only limited agriculture-specific technical support is required, there are others where, in the DPRK context, the implementation through FAO clearly offers distinct advantages. This is specially the case where FAO´s technical strengths and close relationships with respective line ministries and departments, build through a long history of successfully implemented projects, are seen as an important success factor.
* Provided that there is a continued local posting of a Deputy FAOR in DPRK, the FAO internal reporting line from the CTA directly to the Beijing based FAOR should, in the interest of potential administrative efficiency gains, be reviewed when planning potential additional project phases or projects. FAO and UNDP may furthermore benefit from jointly exploring the feasibility of additional measures to increase the efficiency of collaboration and management arrangements[[48]](#footnote-48) for the implementation of future agriculture sector projects.

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# Report Annexes

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## Annex 1: List of Persons Interviewed or Consulted as Part of the Evaluation

**United Nations Development Programme (UNDP):**

* Mr. Ghulam Isaczai, United Nations Resident Coordinator, DPRK
* Ms. Shabnam Mallick, Deputy Resident Representative, UNDP DPRK
* Ms. Nasantuya Chuluun, UNDP Operations Manager
* Mr. Ri Kyong Il, UNDP Programme Analyst, UNDP DPRK
* Ms. Le Le Lan, M&E Specialist, UNDP DPRK
* Ms. Niyara Ablyamitova, UNDP Procurement Analyst, DPRK
* Mr. Ri Hyon Il, UNDP Programme Assistant, DPRK

**Food and Agriculture Organization of the United Nations (FAO):**

* Mr. Belay Gaga, Deputy FAO Representative, FAO DPRK
* Mr. Bir Mandal, FAO Chief Technical Advisor Seed and PHL projects, DPRK
* Mr. Ri Ung Chol, Assistant FAOR, DPRK
* Mr. Jon Kyong Dok, Operations Assistant, FAO, DPRK

**Ministry of Agriculture (MoA):**

* Mr. Jon Jong Nam, Project Coordinator, Ministry of Agriculture
* Mr. Choe Ip Su, PHL Interim Deputy Project Director, Ministry of Agriculture
* Mr. Pak Bong Dok, Seed Project Director, Ministry of Agriculture

**National Coordination Committee (NCC):**

* Mr. Ri Song Chol, Coordinator National Coordination Committee (NCC) for FAO, DPRK
* Mr. Pak Kyong Chol, Coordinator National Coordination Committee (NCC) for UNDP, DPRK

**Cooperative Farms under the “Improved Seed Production for Sustainable Agriculture” and “Reduction of Post-Harvest Losses for Food Security” projects:**

* Ms. Ryu Myong Kum, Chairwoman of Management Board, Pyongam Cooperative Farm
* Mr. Kim Un Bong, Vice Chairman of Management Board, Pyongam Cooperative Farm
* Mr. Kim Chang Sik, Vice Chairman of Management Board, Daepyong Cooperative Farm
* Mr. Ri Son Il, Chief Engineer, Daepyong Cooperative Farm
* Mr. Choe Chang Il, Work Team Leader, Daepyong Cooperative Farm
* Mr. Jang Il Myong, Chairman of Management Board, Soho Cooperative Farm
* Mr. Jon Tong Chol, Chief engineer, Soho Cooperative Farm
* Mr. Ko Song Bo, Chairman of Management Board, Jangsuwon Cooperative Farm
* Mr. Ri Chang Su, Chief Engineer, Jangsuwon Cooperative Farm
* Mr. Pak Il Hun, Deputy Chief Engineer, Jangsuwon Cooperative Farm
* Mr. Ri Yong Gol, Chairman of Management Board, Maekjon Foundation Seed Farm
* Mr. Han Bok Man, Chief Engineer, Maekjon Foundation Seed Farm
* Mr. Ri Yong Chon, Head of Seed Breeding team, Maekjon Foundation Seed Farm
* Mr. Choe Un Chol, Chairman of Management Board, Up Certified Seed Farm, Unpa County
* Mr. Rim Chang Chol, Chief Engineer, Up Certified Seed Farm, Unpa County

## Annex 2: List of Supporting Documents reviewed for the Evaluation

* Strategic Framework For Cooperation Between The United Nations And The Government Of The Democratic People’s Republic Of Korea 2011-2015
* Country Programming Framework (CPF) 2012-2015 for Cooperation and Partnership between FAO and the Government of the Democratic People´s Republic of Korea, August 2012
* FAO/WFP Crop and Food Security Assessment Mission (CFSAM) Special Report DPRK 2013
* FAO, DPRK Mini-Brief, January 2014
* LOA between UNDP and FAO on the implementation of three UNDP, DPRK agriculture projects, 2 Mai 2011
* Minutes of the 1st Project Board Meeting of DRK/10/004 and 005 Projects, 20 June 2012
* Minutes of the 2nd Project Board Meeting of DRK/10/004 and 005 Projects, 26 June 2013
* Minutes of the 3rd Project Board Meeting of DRK/10/004 and 005 Projects, 5 December 2013
* FAO, 2014 (up to Oct. 2014) Annual Work Plan of Project DRK/10/004 – Improved Seed Production for Sustainable Agriculture
* FAO, 2014 (up to Oct. 2014) Annual Work Plan of Project DRK/10/005 - Reduction of Post Harvest Losses for Food Security
* Annual Report (January – December 2013), Reduction of Post Harvest Losses for Food Security FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554
* Annual Report (January – December 2012), Reduction of Post Harvest Losses for Food Security FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554
* Annual Report (January – December 2013), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564
* Annual Report (January – December 2012), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564
* Six Monthly Report (January – June 2012), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564
* Six Monthly Report (January – June 2012), Reduction of Post Harvest Losses for Food Security FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554
* Six Monthly Report (January – June 2013), Improved Seed Production for Sustainable Agriculture, FAO, DRK/10/004//01/99, UNDP Atlas ID: 00078564
* Six Monthly Report (January – June 2013), Reduction of Post Harvest Losses for Food Security FAO, DRK/10/005//01/99, UNDP Atlas ID: 00078554
* FAO DPRK, Q1/2014 Progress Report for 2 FAO projects, 05. 04. 2014
* FAO DPRK, Project Delivery Statement UNDP funded Projects, 31 Dec 2012
* FAO DPRK, Major Activities carried out during Jul. – Sep. 2012
* FAO, Back-To-Office-Report, DPRK Agriculture Project Inception Workshop, 13 September 2011
* FAO, Mission Report Ram C Chaudhary, International Consultant, Improved Seed Production for Sustainable Agriculture Project, August 2012
* FAO, Mission Report Hari Har Ram, International Consultant, Improved Seed Production for Sustainable Agriculture Project, April 2012
* FAO, Consultant Mission Report, Seed Project, N. S. Tunwar, November 2012
* FAO, Vegetable Seed Production Training Manual, Hari Har Ram, Improved Seed Production for Sustainable Agriculture Project, April 2012
* FAO, Training Manual /Handout on Cereal Seed Production, Processing and Quality Control of Major Cereal Crops (Paddy, Maize and Wheat), N S Tunwar
* FAO, MAIZE BREEDING AND SEED PRODUCTION MANUAL, Bir Mandal, 2014
* FAO, Consultant Mission Report PHL Project, Saipin Maneepun, November 2011
* FAO, Consultant Mission Report PHL Project, Prof. Wu Wenfu, 2012
* FAO, Consultant Mission Report, PHL Project, RAUL B. ALAMBAN, December 2012
* FAO, Consultant Mission Report, PHL Project, Keerthi B. Palipane, November 2012
* FAO, PHL Project, Backstopping / Inception Mission Report, Rosa Rolle, August 2011
* FAO, Back-To-Office-Report, CTA Monitoring Visit to Soho, Daesong, Up, Unpa, Taepyong and Pyongam farms, 3&4 Dec. 2013
* FAO, Back-To-Office-Report, CTA Monitoring Visit to Pyongam, Taepyong and Up Cooperative Farms as well as Up Seed Multiplication Farm, 5&6 Feb. 2014
* FAO DPRK, Schedule of Monitoring and Evaluation visits during Oct. – Dec. 2013 under Seed and PHL Projects
* FAO DPRK, Schedule of Monitoring and Evaluation visits during Jan. – Mar. 2014 under Seed and PHL Projects
* FAO DPRK, Trainings and overseas study tours already carried out and to be carried out under Seed and PHL Projects, 06/04/2014
* FAO DPRK, Status Of Post Harvest Loss In DPR Korea, Report on Post Harvest Loss Assessment, Pyongyang Agricultural Campus, Kim Il Sung University, Pyongyang, DPR Korea, January 2014
* FAO DPRK, Total Cash Requirements From April To October 2014 To Be Spent In-Country And Outside Of The Country, Project DRK/10/005 – Reduction of Post Harvest Losses for Food Security, 08 Apr. 2014
* FAO DPRK, Total Cash Requirements From April To October 2014 To Be Spent In-Country And Outside Of The Country, Project DRK/10/004 – Improved Seed Production for Sustainable Agriculture, 08 Apr. 2014
* FAO DPRK, General Information on Demonstration Cooperative Farms under PHL Project, 24. 07. 2012
* FAO DPRK, Technical manuals, assessment reports, power points and handouts prepared by Seed and PHL projects, 09 April 2014;
* FAO DPRK, Analysis of targets and achievements related to major farm equipments/machineries under Project DRK/10/004 – Improved Seed Production for Sustainable Agriculture Date, 08 Apr. 2014
* FAO DPRK, List of Machineries and Infrastructures under Seed and PHL projects as of 28 Feb. 2014
* FAO DPRK, Vegetable seed production at Up Seed Multiplication Farm in 2013
* UNDP, Draft country programme document for the Democratic People’s Republic of Korea (2011-2015)
* UNDP/ DPRK Project Document “Improved Seed Production for Sustainable Agriculture”, 2011
* UNDP/ DPRK Project Document “Reduction of Post Harvest Losses for Food Security”, 2011
* UNDP DPRK, Result Oriented Annual Report (ROAR) 2013
* UNDP, OAI Audit Of UNDP Country Office in DPRK, Report No. 1138, 17 October 2013
* UNDP DPRK Agriculture Sector Interventions Mid-Term Project Review of “Post Harvest Losses & Seed Production” projects, Hugh Bentley, November 2012
* UNDP DPRK, Quarterly Monitoring Report -Three Agriculture Projects-3rd QUARTER 2012 (July-Sept)
* UNDP DPRK, Quarterly Monitoring Report-Three Agriculture Projects 4th Quarter 2012 (Oct-Dec.)
* UNDP, Overall UNDP DPRK Monitoring and Evaluation Action Plan for 2014
* UNDP DPRK Programme Analyst BTOR, 16-18 August 2011
* UNDP DPRK Programme Analyst BTOR, May 2012
* UNDP DPRK Monitoring BTOR, Maekjon Foundation Seed and Up Certified Seed Farms, 1 April 2014
* UNDP DPRK Monitoring BTOR, Pyongam and Daepyong Cooperative farms, 3 April 2014
* UNDP DPRK Monitoring BTOR, Soho and Jangsuwon Cooperative farms, 7 April 2014
* UNDP DPRK, Monitoring Field Trips Record, 2012
* Yonhap News Agency report, “N. Korea´s fertilizer imports from China soar in January”, 4 March 2014
* “The State of North Korean Farming: New Information from the UN Crop Assessment Report”, analytical background paper by Randall Ireson, 18 December 2013
* “Game-Changing Agricultural Policies for North Korea?”, analytical background paper by Randall Ireson, 26 February 2014
* “Developing the DPRK Through Agriculture”, analytical background paper by Randall Ireson, 8 February 2012
* “Agricultural Reform Again – or Not?”, analytical background paper by Randall Ireson, 15 November 2012
* “Namhung Youth Chemical Complex Boosts Production”, KCNA news report, 16 January 2014

## Annex 3: Terms of Reference

|  |  |
| --- | --- |
| **I. POSITION INFORMATION** | |
| **Position Name:**  **Project Name:**  **Duration:**  **Timeframe:** | International Consultant for End of Project Evaluation on UNDP-funded Projects   1. Improved Seed Production for Sustainable Agriculture 2. Reduction of Post-Harvest Losses for Food Security   Consultancy work covers two-weeks of field mission to Pyongyang and 4 project sites as well as desk work  Mission to DPRK shall start in the week of 24th March 2014. |
| II. BACKGROUND INFORMATION/OBJECTIVES | |
| The Democratic People’s Republic of Korea (DPRK) has had mixed experience in its quest to achieve food security. One of the factors constraining the country’s efforts has been poor quality seeds. The seed multiplication sub-sector is struggling with weak research infrastructure and extension programme, low level of awareness among farmers, low level of technology adoption and poor technology applications. All these factors have affected efforts to increase agricultural productivity and rural livelihoods in a sustainable manner. To address this, the Seed project has been supporting interventions at 3 seed farms and 1 Seed Inspection Centre as demonstration to support quality seed multiplication (improved quality and variety), capacity enhancement at the farm level, providing appropriate technology and seed management skills and policy reviews and, reforms with a bid to increase productivity and food availability in an ecologically sustainable manner for sustainable rural livelihoods.  The Democratic People’s Republic of Korea’s effort towards food security has been constrained by several factors notably the high level of losses in farm produce after harvest. The high rate of post-harvest losses has been identified to have serious dampening effect on the country’s efforts for increased agricultural productivity and food security. The Post-Harvest project has been supporting inventions to enhance capability in post-harvest handling of grains through introducing, testing, and optimizing improved, new and appropriate post-harvest technologies, and raising skills development in the management, maintenance and repair of equipment at the county and farm levels. Six cooperative farms have been supported by the project as demonstration farms to raise the awareness of famers on strategic actions and strengthen capacities in loss assessment and use of technologies to reduce post-harvest losses  Both the above projects were initially approved and signed in November 2006, but the implementation could not be started due to suspension of all UNDP programmes in DPR Korea in March 2007. In line with Executive Board directives both the projects were reformulated and finally re-approved in April 2011.  The mission will be composed of an independent international consultant. The evaluation of the projects is intended to do a stocktaking of the projects in close consultation with all the concerned stakeholders within 2013 and based on that provide recommendations to the Government of the DPR Korea, the resource partner – UNDP, and the executing partner – FAO on the progress achieved and effectiveness of stated outputs.  Analysis and recommendations are to be provided through appropriate high-quality reports on technical and managerial aspects of project implementation. | |
| **III. FUNCTIONS** | |
| The Evaluation will assess the performance of the Projects, against the internationally accepted evaluation criteria, namely:   1. Relevance 2. Efficiency 3. Management 4. Effectiveness 5. Impact 6. Sustainability, including environmental sustainability   The mission will assess:   * 1. The relevance of the project to development priorities and needs.   2. The clarity and realism of the project's development and immediate objectives, including prospects for sustainability.   3. The validities of assumptions and frameworks informing the project.   4. The quality, clarity and adequacy of project design including:      + - the clarity and logical consistency between, inputs, activities, outputs and progress towards achievement of objectives (quality, quantity and time-frame);        - the cost-effectiveness of the project design.   5. The efficiency and adequacy of project implementation including: availability of funds as compared with budget; the quality and timeliness of input delivery by both FAO and the Government of the DPRK; managerial and work efficiency; implementation difficulties; adequacy of monitoring and reporting; the reliability of data, sources and means of verification; the extent of national support and commitment and the quality and quantity of administrative and technical support by FAO.   6. Efficiency and accountability in overall management of the project including; * procurement of equipment and other deliverables; processes and quality assurance of goods received * qualitative and quantitative assessment and evaluation on construction of infra-structures and buildings at the project sites * efficiency and transparency in overall financial management for project activities * adequacy of reports submitted by FAO to UNDP.   1. Effectiveness of project results, including a full and systematic assessment of outputs produced to date (quantity and quality as compared with work-plan and objectives). The mission will especially review the status and quality of work on:      + - Improved seed production for sustainable agriculture;        - Reduction of post-harvest losses for food security;        - Capacity building.   2. The prospects for sustaining the projects’ results by the beneficiaries and the host institutions after the termination of the project   3. The cost-effectiveness of project activities.   Based on the above analysis the mission will draw specific conclusions and make proposals for any further necessary action by the Government of the DPRK, UNDP and FAO to ensure sustainable development, including any need for additional assistance and activities of the project prior to its completion. The mission will draw attention to any lessons of general interest.  Prior to engagement and visiting the Project Office, the Mission shall receive all the relevant documents including, but not limited to:   * Project Document for two projects * UN Strategic Framework 2011-2015 for the DPRK * DPRK Country Programme Document 2011-2015 * Letter of Agreement for the Implementation of the Project between UNDP and FAO * 6-month/Annual Progress Reports submitted by the CTA * Existing Annual Work Plans * Quarterly Financial Reports * Minutes of Project Steering Committee meetings * Back-to-Office Reports of UNDP staff (if any) * Consultancy Reports submitted by Technical Backstopping Missions and other consults for the projects   The International consultant should at least interview the following people including, but not limited to:   * UNDP Resident Representative * UNDP Deputy Resident Representative * UNDP Programme Analyst on Food Security and Rural Development * NCC (National Coordinating Committee) Coordinator for UNDP (DPRK Government Official) * NCC (National Coordinating Committee) Coordinator for FAO (DPRK Government Official) * National Project Director from the Ministry of Agriculture * National Project Coordinator from the Ministry of Agriculture * Project Manager (FAO) * Manager of the Project farms at the project sites * Project Administrative Assistant (FAO) * UNDP Operations Manager * UNDP Procurement Analyst * Project Steering Committee Members * Relevant project stakeholders and personnel * Other relevant personnel at UNDP Country Office and FAO representation in the DPRK. | |
| **IV. DELIVERABLES** | |
| * Management De-briefing | |
| * Draft Stock Taking Report * Set of recommendations for **options** on project extension and/or substantive revision; focus, scope and approach. | |
| * Final Evaluation Report | |
| **V. Minimum Requirement for Qualifications and Experience** | |
| 1. Advanced universitydegree in agricultural economics 2. Experience of drafting high-quality Project evaluation and monitoring reports for international donors and executing agencies 3. Experience of evaluating agricultural development projects focusing on seed and post-harvest sectors 4. Experience of working in DPR Korea or similar working conditions will be another distinctive asset 5. An understanding of the food security dimensions of agricultural projects and the Millennium Development Goals 6. Excellent facilitation, diplomatic, communication and team working skills are required 7. An excellent working command of English (spoken and written) is required. | |

# Annex 4: Glossary of Terms

Disadvantaged A person or geographical area In unfavorable circumstances, especially with regard to financial or social opportunities

Effectiveness The extent to which the development intervention’s objectives were achieved, or are expected to be achieved, taking into account their relative importance.

Efficiency A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results: Efficiency measures the outputs -- qualitative and quantitative -- in relation to the inputs. It is an economic term which signifies that the aid uses the least costly resources possible in order to achieve the desired results. This generally requires comparing alternative approaches to achieving the same outputs, to see whether the most efficient process has been adopted.

Impact Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended: This involves the main impacts and effects resulting from the activity on the local social, economic, environmental and other development indicators. The examination should be concerned with both intended and unintended results and must also include the positive and negative impact of external factors, such as changes in terms of trade and financial conditions.

Indicator Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor

Relevance The extent to which the objectives of a development intervention are consistent with beneficiaries’ requirements, country needs, global priorities and partners’ and donors’ policies.

Sustainability The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time

Vulnerability The inability to withstand the effects of a hostile environment

# Annex 5: Demonstration Farms under PHL and Seed Projects

**General Information on Demonstration Cooperative Farms under PHL Project:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Farm | Jangsuwon | Osin | Pyongam | Soho | Yonan | Taepyong | Total |
| 1. | No. of farmers | 1211 | 1200 | 820 | 1250 | 1002 | 1321 | 6804 |
| 2. | No. of male farmers | 598 | 530 | 380 | 560 | 482 | 590 | 3140 |
| 3. | No. of female farmers | 613 | 670 | 440 | 690 | 520 | 731 | 3664 |
| 4. | No. of technicians | 11 | 15 | 12 | 30 | 100 | 13 | 181 |
| 5. | Total crop area (ha) | 650 | 822 | 550 | 520 | 720 | 731 | 3993 |
| 6. | Paddy area (ha) | 352 | 318 | 110 | 502 | 570 | 201 | 2053 |
| 7. | Non paddy area (ha) | 298 | 504 | 440 | 18 | 150 | 530 | 1940 |
| 8. | Maize area (ha) | 215 | 260 | 330 | 15 | 108 | 352 | 1280 |
| 9. | Other crop area (ha) | 83 | 244 | 110 | 54 | 42 | 178 | 711 |
| 10. | Total production (tons) | 2350 | 4112 | 1225 | 3160 | 4723 | 2250 | 17820 |
| 11. | No. of tractors | 25 | 18 | 13 | 17 | 19 | 12 | 104 |
| 12. | No. of thresher | 6 | 9 | 3 | 7 | 6 | 4 | 35 |
| 13. | No. of bullocks plough ox | 50 | 92 | 65 | 99 | 77 | 131 | 514 |
| 14. | No. of work teams | 6 | 10 | 9 | 7 | 6 | 8 | 46 |

**General Information on Demonstration Cooperative Farms under Seed Project:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Maekjon Foundation  Farm | Unpa Certified  Farm | Daesong Certified  Farm | Total |
| 1. Total farmers number | 1016 | 702 | 1894 | 3,612 |
| 1. No. of male farmers | 487 | 312 | 909 | 1,708 |
| 1. No. of female farmers | 529 | 390 | 985 | 1,904 |
| 1. No. of technician | 89 | 93 | 203 | 385 |
| 1. Total arable land (ha) | 377 | 270 | 943 | 1,590 |
| 1. Paddy(ha) | 165 | 53 | 701 | 919 |
| 1. Non Paddy(ha) | 212 | 217 | 242 | 671 |
| 1. Total Area for seed production(ha) | 192 | 89 | 718 | 999 |
| 1. No. of cleaning machines | 3 | 2 | 2 | 7 |
| 1. No. of rice threshing machine | 5 | 3 | 11 | 19 |
| 1. No. of maize sheller | 5 | 3 | 12 | 20 |
| 1. No. of tractor | 16 | 14 | 25 | 55 |
| 1. No. of grain production work team | 8 | 3 | 12 | 23 |

Date: 24:07:12

# Annex 6: Interview Questionnaire – Evaluation of UNDP financed Agricultural Projects in DPRK

Interview partner:

Organization / Role:

Date:

Other interviewed person present:

**Relevance**

1. What is your perception of the relevance of the 2 projects with regard to DPRK development priorities and needs? To what degree were the objectives and assumptions made with regard to these two projects valid?
2. Are the activities and outputs consistent with the intended impacts and effects, overall goal and the attainment of its objectives?
3. What is your perception of the clarity and realism of the project's (development and immediate) objectives? What are your perceptions with regard to the quality of the project design? Clarity? Consistency?

**Efficiency**

1. Were project activities cost-efficient?
2. Were objectives achieved on time? How timely were project inputs delivered?
3. Was the programme or project implemented in the most efficient way compared to alternatives?
4. What differences in the project design could have possibly led to an (even) higher degree of cost effectiveness?
5. What is your perception of the efficiency and accountability of the procurement of equipment and other deliverables?
6. What processes were used for quality assurance of delivered goods?
7. How did you perceive the quality of delivered inputs? How do you perceive the quality of constructed infra-structures and buildings at the project sites?
8. How did you perceive the efficiency (and transparency) in overall financial management for project activities?

**Management**

1. Did the projects face any difficulties during the implementation? How did this impact efficiency and adequacy of the project implementation? Overall managerial and work efficiency?
2. Availability of funds as compared with budget?
3. Adequacy of monitoring and reporting / adequacy of reports submitted by FAO to UNDP?
4. Reliability of data? Sources and means of verification?
5. Extent of national support and commitment?
6. Quality and quantity of administrative and technical support by FAO?

**Effectiveness**

1. To what extent were the objectives achieved / are likely to be achieved?
2. What were the major factors influencing the achievement or non-achievement of the objectives?
3. What are the potential weaknesses and strengths of the two projects?
4. What is you perception of the effectiveness of project results for improved seed production?
5. What is you perception of the effectiveness of project results for the reduction of post-harvest losses?
6. What is you perception of the effectiveness of project results for capacity building?

**Impact**

1. What has happened as a result of the project?
2. What real difference has the activity made to the beneficiaries? How many people have been affected? To what degree has the achieved increase in production and yields benefitted individual cooperative farmers (Income improvement for cooperative farmers); Quantity of produce and % of production going to individual farmers; System in place; Changes in quotas from 2011 to 2013.

**Sustainability, including environmental sustainability**

1. To what extent are the project outputs and outcomes sustainable / what are the prospects for sustaining the projects’ results by the beneficiaries and the host institutions after the termination of the project? To what degree did the 2 project documents delineate a clear strategy to ensure sustainability of the initiatives?
2. What follow-up actions would in your view help to possibly increase the sustainability of the gains made through the 2 projects?
3. What lessons have you learnt from these two projects that you wish to see considered for forthcoming projects?
4. What are your recommendations for the remaining project period / additional activities of the project prior to its completion?
5. How do you see the need for additional assistance in the seed and PHL sectors / What are your recommendations with regard to potential additional/future project phases?

1. UNDP, Guidelines for Outcome Evaluators, 2002; UNDP, Handbook on Monitoring and Evaluating for Results, 2002 and UNDP, Handbook on Planning, Monitoring and Evaluating for Development Results, 2009; UNEG ‘Ethical Guidelines for Evaluators’. [↑](#footnote-ref-1)
2. The major portion of the country is rugged mountain terrain with little scope for increasing cereal production by expanding farming into new areas. Arable land is limited to about 19.5% of the total landmass (Source: FAO, 2012). [↑](#footnote-ref-2)
3. The System of Rice Intensification (SRI) has the potential of increasing yields by over 20 percent but is coupled with the use of plastic trays for planting the rice seedlings. [↑](#footnote-ref-3)
4. Using better seeding equipment has the potential to increase yields by around 10 percent because of better germination and appropriate spacing between each plant. Lack of tractor power makes land preparation slow and difficult, thus impeding the use of off-season manures or of double cropping. [↑](#footnote-ref-4)
5. Rotating cereal crops (especially maize and wheat) with legumes such as soy or green manure could potentially increase yields by around 10 percent [↑](#footnote-ref-5)
6. Conservation agriculture (low tillage farming) can reduce soil erosion, save fuel, and improve soil quality [↑](#footnote-ref-6)
7. Improved timing of harvesting and threshing processes importantly reduces post harvest losses [↑](#footnote-ref-7)
8. Source: FAO/WFP, 2013 Crop and Food Security Assessment Mission (CFSAM) Report. More recent reports published between January and April 2014 underline significant capacity increases to produce fertilizers, herbicides, insecticides and plastic sheeting domestically at the Namhung Youth Chemical Complex. [↑](#footnote-ref-8)
9. Source: “The State of North Korean Farming: New Information from the UN Crop Assessment Report”, background analysis by Randall Ireson, 18 December 2013 [↑](#footnote-ref-9)
10. In 2013 DPRK bought a total of 207,334 mt of fertilizers from China, down by 18 percent from the previous year, according to news reports (Source: Yonhap News Agency report of 4 March 2014). Significant import increases were recorded for January 2014 when the country imported 35,113 mt of fertilizer from China according to data by the Korea Rural Economic Institute (KREI). [↑](#footnote-ref-10)
11. Applying lime to the fields to offset acid soils has the potential to increase yields by more than 20 percent [↑](#footnote-ref-11)
12. All cereals, soybean, and potato output of the cooperative farms must be sold to the State [↑](#footnote-ref-12)
13. Soybean is officially purchased for KPW 40/kg, compared with KPW 20/kg for maize. The CFSAM notes that the price should be at least KPW 55 to compensate for the inherent yield difference between maize and soybeans. The wider planting of soybean and other legumes is also limited because of the State set grain production quotas. [↑](#footnote-ref-13)
14. Prices of farm inputs are also set by the State [↑](#footnote-ref-14)
15. FAO/WFP, 2013 Crop and Food Security Assessment Mission (CFSAM) Report [↑](#footnote-ref-15)
16. First national conference of farm sub-work team leaders in Pyongyang on 6-7 February 2014 [↑](#footnote-ref-16)
17. Master Trainers = Concerned participants of International Study Tours + Concerned National Consultants + National Project Coordinator. [↑](#footnote-ref-17)
18. Source: PHL project Annual Report 2013; data not independently verifiable [↑](#footnote-ref-18)
19. The reduction in the number of trainings and participants was done in agreement with the PB. Savings were instead used for expendable and non-expendable items on the seed farms. [↑](#footnote-ref-19)
20. It should be noted that these production increases are in this form to be used only as an “indicative proxy indicator” as they may not be fully attributable to an achieved reduction in post-harvest losses. A more detailed analysis of farm records needs to be undertaken by the project to properly quantify the actually achieved reduction of respective post harvest losses. [↑](#footnote-ref-20)
21. Recorded production increases may not be fully attributable to an achieved reduction in post-harvest losses. A more detailed analysis of farm records needs to be undertaken by the project to properly quantify the actually achieved reduction of respective post harvest losses [↑](#footnote-ref-21)
22. Recorded production increases are in this form to be used only as “indicative proxy indicators” as they may not be fully attributable to the “Improved Seed Production for Sustainable Agriculture” project. Other factors, such as climatic conditions, changes in the cultivated area or different levels of fertilizer use obviously also have an important influence on production. A more detailed analysis of farm records needs to be undertaken by the project to properly quantify the actually achieved results. [↑](#footnote-ref-22)
23. The end date was subsequently extended until 31 October 2014 [↑](#footnote-ref-23)
24. Source for all below figures: FAO FPMIS as on 31:12:2013 [↑](#footnote-ref-24)
25. Financial transaction problems for FAO were most pronounced from May to October 2013 [↑](#footnote-ref-25)
26. FAO procurement of goods valued below USD 100,000 is handled through the respective FAO Representations, while goods procurement above USD 100,000 it is done at HQ level. [↑](#footnote-ref-26)
27. There are specific issues of import restriction constraining the procurement of computer & IT equipment in DPR Korea. This problem is faced by FAO as well as by UNDP. The absence of computers, printers, photocopiers, portable generator, digital cam coder, and so on has been affecting adversely the preparation of training hand-outs. [↑](#footnote-ref-27)
28. The use of third party surveyor services is mandatory for larger scale deliveries (above USD 100,000 for machinery) [↑](#footnote-ref-28)
29. Perceived or actual end-user experience regarding prevalence of sub-standard quality [↑](#footnote-ref-29)
30. Following repeated requests from the MoA and approval from the second Project Board Meeting held on June 26, 2013, the Project agreed to shift US$ 166,000 from expendable items to construct 6 more threshing yards. Based on previous price estimates the Project Document initially foresaw the construction of 20 threshing yards. [↑](#footnote-ref-30)
31. Paragraph 12 of the “Standard Letter o Agreement between the United Nations Development Programme and Food and Agriculture Organization of the UN (FAO) on the Implementation of three UNDP, DPRK Agriculture Projects”, signed on 29 April 2011 [↑](#footnote-ref-31)
32. Paragraph 14 of the “Standard Letter o Agreement between the United Nations Development Programme and Food and Agriculture Organization of the UN (FAO) on the Implementation of three UNDP, DPRK Agriculture Projects”, signed on 29 April 2011 [↑](#footnote-ref-32)
33. The Seed Project Document furthermore indicates a budget component amounting to US$ 93,100 for planned UNDP expenditures, including Personnel (4 person months each for an International Procurement Officer, a UNV IT Specialist and a National Admin Assistant), Non-Expendable Equipment and Travel. [↑](#footnote-ref-33)
34. The PHL Project Document furthermore indicates a budget component amounting to US$ 93,100 for planned UNDP expenditures, including Personnel (4 person months each for an International Procurement Officer, a UNV IT Specialist and a National Admin Assistant), Non-Expendable Equipment and Travel. [↑](#footnote-ref-34)
35. Quarterly reports replaced in part by bi-annual progress reports in the updated overall UNDP DPRK Monitoring and Evaluation Action Plan for 2014 [↑](#footnote-ref-35)
36. No longer included in updated overall UNDP DPRK Monitoring and Evaluation Action Plan for 2014 [↑](#footnote-ref-36)
37. Replaced by bi-annual CTA progress reports in line with updated UNDP DPRK overall M&E plans [↑](#footnote-ref-37)
38. Issue 2, UNDP OAI Audit Report No. 1138, page ii and 7, 17 October 2013 [↑](#footnote-ref-38)
39. The Chief Technical Advisor, the National Project Coordinator, and National Consultants carried out monitoring visits to all cooperative farms benefitting from the two projects on a need basis. [↑](#footnote-ref-39)
40. In the absence of a UNDP M&E officer between 28 March 2013 and 10 February 2014, international personnel (CO’s management, PMs, project technical consultants, etc.) carried out monitoring visits. The advantage of these team visits, carried out together with the CTA, was that different members visited project sites, viewed assets and submitted reports, which served to validate monitoring knowledge through multiple sources. The prolonged absence of a UNDP M&E specialist however did leave a gap in terms of M&E related specific technical knowledge within the CO and activities undertaken to ensure uninterrupted recording and retention of obtained monitoring data. [↑](#footnote-ref-40)
41. Back To Office Report [↑](#footnote-ref-41)
42. http://en.wikipedia.org/wiki/SMART\_criteria; [↑](#footnote-ref-42)
43. From October 2012 onwards the FAO/UNDP PHL project undertook, in close collaboration with the Pyongyang Agricultural Campus (PAC), Kim Il Sung University, a detailed assessment of post harvest losses on the six cooperative farms that were part of the PHL project. The assessment is a complete study, designed on a scientific basis, providing base-line data on losses occurring at different stages of the post harvest system. In addition, it analyses the reasons for the losses so that corrective measures could be adopted by introducing improved and appropriate technologies. It is however also seen as being extremely useful to measure the actually achieved reductions in post harvest losses as a result of the project activities undertaken on each of the six cooperative farms covered by the project. According to the staff of the PAC and Ministry of Agriculture this has in fact been the first try in DPR Korea to systematically assess and precisely quantify estimated losses occurring at each stage in the post harvest system at field level. Reliability of the data it contains is assumed, given the fact that the study was designed on a scientific basis. [↑](#footnote-ref-43)
44. The project, as designed, did not foresee to undertake such a baseline survey. [↑](#footnote-ref-44)
45. The two projects benefited in total from the services of 7 separate International FAO Consultants (IC). Out of this, there were 4 in support of post harvest activities, while another 3 were fielded under the seed project (IC Vegetable Seed Production, Apr. 08 – 30, 2012 (23 days), IC Plant Breeder, Aug. 05 – 28, 2012 (24 days), and IC Cereal Seed Production and quality control, 41 days from Sep. 16 – Oct. 26). [↑](#footnote-ref-45)
46. Chief Technical Adviser (CTA) Terms of Reference state that the CTA works “under the overall managerial and administrative supervision of the FAO Representative in China, the technical supervision of FAO Regional Office

    for Asia and the Pacific and the guidance of the Senior Programme Adviser/Head of Programmes UNDP” and that he is “responsible for the coordination, implementation, and operational management of the projects in close collaboration with National Project Director (NPD) and the Ministry of Agriculture (MoA) of the Democratic People’s Republic of Korea”. [↑](#footnote-ref-46)
47. FAO supported the development of the “Beneficiary Results Assessment” (BRA) methodology. Additional information is available on the FAO website (http://www.fao.org/fileadmin/user\_upload/emergencies/docs/Guide\_for\_Beneficiary\_Results\_Assessment.pdf) [↑](#footnote-ref-47)
48. Management arrangements for the two evaluated projects, as described in the respective Project Documents, specify that the FAO Chief Technical Adviser supervises the overall implementation of the projects “under the guidance” of “the Resident Representative of UNDP or his designate” and the “UNDP Senior Programme Advisor / Head of Programmes”. The UNDP CO provides CTA guidance as well as oversight and advice in the execution of the projects furthermore in its role as Chair of the Project Board. [↑](#footnote-ref-48)