



**COUNTRY PROGRAMMING
FRAMEWORK (CPF)
2012-2015**

for

The Cooperation and Partnership

Between

**FAO and the Government of the Democratic
People's Republic of Korea**

August 2012

FOREWORD

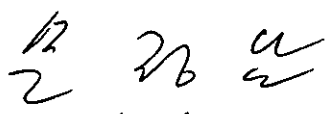
The Government of the Democratic People's Republic of Korea (DPR Korea), represented by the National Committee for FAO, and the Food and Agriculture Organization of the United Nations (FAO), represented by its Representative to the DPR Korea (FAOR), are pleased to jointly launch the Country Programming Framework (CPF) 2012–2015 for the DPR Korea, as stipulated hereunder.

The CPF 2012–2015 is a result of extensive consultations held with a wide range of stakeholders and partners within the country as well as with the relevant technical units of FAO headquarters in Rome and the regional office in Bangkok. The signatories below express sincere appreciation to all who have so willingly made constructive comments and suggestions through the consultative process.

This document, co-owned by the Government of the DPR Korea and FAO, indicates the broad commitment of FAO, subject to the availability of required funding, to assist the Government of the DPR Korea in its efforts to achieve national development objectives, described in the National Millennium Development Goals. It supplements and contributes to the strategic objectives of the UN common systems as expressed in the UN Strategic Framework 2011–2015 for DPR Korea.

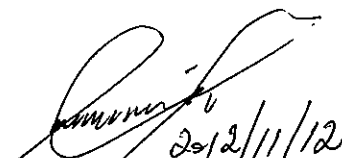
By endorsing the CPF 2012–2015, the Government of the DPR Korea is committed to providing collaboration, to the fullest possible extent with regard to available capacity and resources, to facilitate the achievement of the objectives and actions proposed in this document.

The CPF 2012–2015 will be pursued in partnerships as broad as possible and in alignment with the joint efforts of the Government of the DPR Korea and the donor community for enhanced coordination and aid effectiveness. The Government of the DPR Korea and FAO look forward to seeking collaboration and support from concerned partners *vis-à-vis* the successful implementation of the CPF 2012–2015.


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ACRONYMS AND ABBREVIATIONS

AAS	Academy of Agricultural Sciences
BAFS	Branch Academy of Forestry Sciences
CCA	Common Country Assessment
CBS	Central Bureau of Statistics
CFC	Common Fund for Commodities
CFSAM	FAO/WFP Crop and Food Security Assessment Mission
CIP	International Potato Center
CPF	Country Programming Framework
CPFIC	Country Programming Framework Implementation Committee
DPR Korea	Democratic People's Republic of Korea
EMOP	Emergency Operation
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
FAOSOs	FAO Strategic Objectives
FAORP	FAO Regional Priorities
FCCC	Framework Convention on Climate Change
GDP	Gross Domestic Product
GNP	Gross National Product
Govt DPRK	Government of DPRK
IFAD	International Fund for Agricultural Development
<i>Juche</i>	Self reliance
MDGs	Millennium Development Goals
MoA	Ministry of Agriculture
MoC	Ministry of Commerce
MoFi	Ministry of Fisheries
MoFo	Ministry of Forestry
MoFA	Ministry of Food Administration
MoFP	Ministry of Foodstuff Processing
MoLEP	Ministry of Land and Environmental Protection
MoPH	Ministry of Public Health
NCFAO	DPRK National Committee for FAO
NFA	National Fruit Agency
NMDGs	National MDGs
OSRO	Office for Special Relief Operations
PDS	Public Distribution System
PRRO	Protracted Relief and Recovery Operation
REDD	Reducing Emission from Deforestation and Forest Degradation
RFSA	Rapid Food Security Assessment
RPFAP	Regional Priority Framework for Asia and the Pacific 2010-2019
SCST	State Commission for Science and Technologies
SCQM	State Commission for Quality Management
SPC	State Planning Commission
TCP	Technical Cooperation Programme
TF	Trust Fund
UN	United Nations

UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNDP CP	UNDP Country Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNSF	UN Strategic Framework
UNPAF	United Nations Partnership Framework
WFP	World Food Programme
WHO	World Health Organization

1. INTRODUCTION

The Country Programming Framework 2012-2015 (CPF) for the Democratic People's Republic of Korea (DPR Korea) was prepared in close consultation with the National Committee for FAO of the DPR Korea. Extensive consultations were held with all stakeholders – ministries (Ministry of Agriculture; Ministry of Land and Environmental Protection; Ministry of Fisheries; and Ministry of Forestry), national agencies and educational/research institutions, donors and United Nations agencies. It reflects the in-depth discussions and agreement on the United Nations Strategic Framework (2011-2015) between the Government and the United Nations Country Team (UNCT). It supports the Government in achieving its national objectives of improving the living standards of its people in line with the Millennium Development Goals (MDGs).

The CPF defines the Food and Agriculture Organization's (FAO) priorities for technical cooperation with the Government of the DPR Korea. The CPF is a framework to guide how FAO can best assist the Government of DPR Korea in meeting its development priorities. It sets out jointly-agreed medium-term priorities for DPR Korea Government-FAO collaboration in the areas of FAO's competence, including agriculture, food security, natural resource management and rural livelihoods, mainly through agriculture-based activities. The CPF envisages cooperation between FAO and the DPR Korea Government during 2012-2015 with external assistance from the UN system and other bilateral/multilateral development partners. The CPF has been developed in line with current Government policies, strategies, priorities and the National Millennium Development Goals. Equally, the CPF was crafted in consideration of the country's strategic needs and priorities defined in the UN Strategic Framework 2011-2015 (UNSF), including the other important documents, notably the MDGs and UNDP Country Programme 2011-2015 (UNCP). This is to ensure the consistency of policies, strategies and priorities of the Government and the UN system for sustainable agricultural development and food security.

The CPF reviews existing DPR Korea Government priorities *vis-à-vis* past and ongoing FAO's interventions to identify the gaps in and future potential for FAO assistance. It identifies the following five priority areas with an estimated total resources of US\$77 831 066 for 94 programmes/projects, of which US\$ 6 515 638 has already been committed:

- A: Strengthening national food and nutritional security
- B: Improving natural resource management
- C: Improving rural livelihood
- D: Coping with climate change
- E: Strengthening institutional capacity for agricultural research, extension and administration

The CPF is a living document, the contents of which will be adjusted over time taking into consideration the changing circumstances and needs of the country. The implementation of the CPF 2012-2015 will be pursued in partnerships as broad as possible and in alignment with the joint efforts of the Government of DPR Korea and FAO/external development partners for enhanced coordination and aid effectiveness.

The Government of DPR Korea and FAO look forward to seeking collaboration with, and support from, concerned partners, *vis-à-vis* the successful implementation of the CPF

2012-2015.

2. SITUATION ANALYSIS

2.1 Economic and social policies

The division of Korea into two parts by outside forces in 1945 left DPR Korea with a major part of the mineral wealth, but with limited areas of agricultural land. The economy was in a state of colonial backwardness just after the liberation of the country, awfully crippled. Worse still, the country was almost entirely destroyed during the Korean War (1950-53) and was rebuilt from nothing.

Following the state philosophy of *Juche* (self-reliance), DPR Korea is committed to an independent economy based on domestic raw materials, technology and management. The Government set forth the line of building an independent national economy which is to be fed with their own raw materials, run by their own technology and technicians, comprehensively developed and equipped with up-to-date technology. The State upgrades the national economy according to a plan so as to strengthen the foundations of independent national economy and steadily improve the standard of people's living. The Government's recent major policy on - economic development is to make a leap forward in the building of an economically powerful nation. Agriculture is a major thrust area.

The essential elements of sustainable human development are in place in DPR Korea. An advanced educational system was established within a short timeframe after the country's liberation in 1945. All people in the country, irrespective of age and sex, are entitled to receive education through various educational networks, and their level of general knowledge, on average, is above that of secondary education. According to the 2008 population census, the literacy rate of people of 10 years and above is 99.998%, which is very high compared with other countries.

Universal free medical care has been in place since 1953 and complete, universal free medical care is provided with clinics in rural areas converted into hospitals. As a result, a well-regulated system of preventive medical treatment has been set up wherever people live - from towns to remote mountain areas. The overall average life expectancy in 2008 was 69.3 years with 72.7 for females and 65.6 for males.

2.2 Agricultural sector

2.2.1 Agriculture in the economy

Agriculture plays a very important role in developing national economy and improving people's livelihood. On numerous occasions, Government renewed its commitment to agriculture and underlined the objective to achieve self-sufficiency in basic cereals.

Agriculture, which is very intensively managed, has always been constrained by the topographic features of the country which is mainly mountainous. The winters are harsh and the growing season is extremely short. The economic difficulties that affected industry at the start of the 1990s' also affected agricultural production. The aging of agricultural plants and

equipment and a shortage of energy also affected production. Since 1994, the shortages have been exacerbated by a series of natural disasters.

With a motive to solve the current food shortages by itself, priority was given to the agricultural sector in the national development policy. The innovative farming methods based on the policy of "a correct crop for soil and climate" were strongly emphasized by the Government through the expanded potato cultivation and the extended double-cropping programme.

Land use and farming systems: The main land use systems comprise: (i) annual crop land; (ii) perennial crop land; (iii) permanent meadows and pastures; and (iv) forests and woodlands. About 1.84 million ha of land is used for agriculture, of which 144 000 ha is used for orchard crops (fruit, mulberries), 574 000 ha for paddy crop, and 1 005 000 ha for non-paddy crops.

All flat land is irrigated for paddy. Sloping land below 16° is planted with maize and other field crops; land above 16° is planted with mulberry and economically-valuable trees. Hill tops are usually forested. Each rural household is entitled to a plot of 30 *pyong* (nearly 100 m²) for household use. Such plots are intensively cultivated with beans, potatoes, cabbage, and maize for family consumption and for sustaining small livestock.

In order to increase cereal production in the country where farming area is limited, the Government put forward the policy of double-cropping. The double-cropping system is based on growing different short-growth-period crops in different seasons on the same land in one year. The introduction of the double-cropping system has increased the country's land utilization rate as well as yield. In parallel to the above activities, the initiatives for quality seeds production are being promoted by the Government.

Water resources: Water resources are abundant in DPR Korea. By enacting the Law on Water Resources, the Government established a legal framework for developing, using and conserving water resources, and took steps for conserving water resources throughout the country and using them more effectively for human daily life. However, water resources have diminished in recent years due to severe droughts, floods and destruction of forests as a result of climate change. The proportion of total water resources used saw a 1.66 fold increase, from 11.2 percent in 1990 to 18.6 percent in 2008. In 2008 the proportion of water used for industrial purposes was 30 percent, for agriculture 62 percent and 8 percent for domestic consumption.

Substantial investment has been made in reservoirs, canals and pumping systems by the Government. DPR Korea agriculture sector has some 1, 700 reservoirs, conserving 3.8 billion m³ of irrigation water. The Government objective is to ensure full irrigation to all annual croplands. Operation of the West Sea Barrage is making a major contribution towards this objective.

Irrigation is mostly from surface water. All but 300 000 ha of irrigated areas are served by pumping from rivers. This involves considerable lifts using large amounts of electrical and fuel energy. Groundwater is rarely used. Paddy land is irrigated by flood basin, uplands by both furrow and sprinkler. Furrow irrigation in uplands is often applied on sloping land favouring erosion.

Land and environmental protection: The Government has set environmental protection as an important national strategy to build a prosperous and powerful country and to provide people with independent and creative living conditions, and, hence, is increasing investment to ensure environmental sustainability. The Government puts forward forestation and water conservation as important policies in the area of environmental protection, considering the fact that mountainous and non-arable lands account for most of its territory.

Government instituted "land management months" in spring and autumn each year for extending the coverage of mountains with trees and flowers. It also implemented a forestation policy and pushed ahead with the renovation of tree nurseries, which are now capable of growing as many saplings as needed to be planted every year.

Fishery resource management: Biodiversity of marine ecosystem is relatively abundant in the DPR Korea; 450 species belonging to 295 genera and 140 families of fish are living in the offshore waters in the East Sea of Korea, and 250 species belonging to 181 genera and 108 families in the offshore waters of the West Sea of Korea. There has not been any significant change in the number of fish species.

While implementing governmental policy of extending and intensifying freshwater aquaculture, the numbers of fish farms and aquaculture species have been increased. Most farms have fish ponds which contribute to their household diet. The most common species grown are catfish and carp.

2.2.2 Recent performance

The limited potential for expanding domestic food production through area expansion has meant that the Government has laid heavy emphasis on intensification of agriculture. The main features of the intensification strategy have been: i) irrigation - the construction of some 1 700 artificial reservoirs and 40 000 km of canals; ii) mechanization - there are, on average 4~5 tractors per 100 hectares of cultivated land; iii) the excessive use of agro-chemicals; and iv) electrification. The system of crop husbandry relies heavily on the principle of individual plant care, from sowing to harvesting.

Very short fallow periods, high planting densities and limited crop rotations have inevitably led to declining soil fertility. Climatic conditions, which do not permit more than one crop per year, limit the possibility of intra-annual rotation. To achieve the objective of maximizing output, therefore, inorganic fertilizer application rates are very high.

Rice: Paddy is the most important crop of DPR Korea in terms of both cultivated area and production. It is grown mainly in the central, south-western and south-eastern parts of the country. Paddy is cultivated in the alluvial plains or on graded terraces equipped with irrigation control systems. The cultivated area has remained almost constant over the last decade. However, as a result of recently-completed large-scale realignment operations to improve the layout of paddy plots, the overall paddy production area has been increased. In 2010, the area under paddy cultivation was 570 186 hectares. In 2010 the national average paddy yield, at about 4.32 tonnes per hectare, showed an increase of nearly 5.1 percent over the previous year's 4.11 tonnes per hectare (Table 1).

Maize: Maize, which is mainly produced under rain-fed conditions, is more universally distributed than paddy. In 2010 the area under maize cultivation was 502 770 hectares which is virtually the same as that of the previous year. The weather conditions for maize are much the same as rice: water-logging, lack of sunshine, and poor pollination due to typhoons. However, average yields of 3.45 tonnes per hectare in 2010 showed 1.8 percent increase compared to 3.39 tonnes per hectare in 2009 although the increase would have been much greater if the weather had been normal and inputs more balanced. As a result, the national maize production for 2010 was 1.73 million tons.

Table 1: Comparison between 2009/10 and 2008/09 national aggregate production of food crops (in cereal equivalent)

	2010			2009			Change 2010 over 2009		
	Area 000 ha	Yield t/ha	Production 000 t	Area 000 ha	Yield t/ha	Production 000 t	Area %	Yield %	Production %
MAIN SEASON, Farm (Total)	1 224	3.7¹	4 530	1 203	3.62	4 351	1.7	2.2	4.1
Paddy	570	4.32	2 463	569	4.11	2 336	0.2	5.1	5.4
Maize	503	3.45	1 736	503	3.39	1 705	0.0	1.8	1.8
Other cereals	13	1.46	19	13	1.69	22	0.0	-13.6	-13.6
Potatoes ¹	48	3.29	158	50	2.78	139	-4	18.3	13.7
Soybeans	90	1.71	154	68	2.19	149	32.4	-21.9	3.4
EARLY SEASON, Farm (Total)	236	2.51	593	235	2.81	660	0.4	-10.7	-10.2
Wheat and barley ²	104	1.95	203	104	2.32	241	0.0	-15.9	-15.8
Potatoes ¹	132	2.95	390	131	3.2	419	0.8	-7.8	-6.9
NATIONAL TOTAL (Farm)	1 460	3.51	5 123	1 438	3.48	5 011	1.5	0.9	2.2

¹ Potato is converted into cereal at the rate of 4:1.

² Includes a small amount of main crop wheat and barley grown mainly in N. and S. Hamgyong, and Ryanggang Provinces.

Source: MoA

Potatoes: Potatoes are grown as a spring crop for double-cropping in central bowl region, and as a summer crop in the cooler northern highlands where a shorter growing season is experienced. As the first crop, potato is sown in March-April and harvested in June, while as a main crop it is sown in May-June and harvested in August-September. In response to the reduced productivity of the main cereals since late 1990s, and in an attempt to boost carbohydrate production, the land under potato cultivation has been gradually increasing in the major agricultural areas over the past decade.

Wheat/barley: Greater emphasis has recently been placed on the early crop in view of the frequent poor yields of winter wheat. Winter wheat is sown from the end of September to mid-October, immediately after harvesting of the main-season crops. Factors influencing the area under winter wheat cultivation include autumn and spring rainfall, timely availability of seed, and the availability of adequate farm power and labour at a time when the demand for labour is high for various other operations, especially for harvesting paddy. Winter wheat and spring barley are produced in all provinces except a few provinces in northern areas. They are the main cereals in the *Double-Cropping Programme* initiated in 1996 jointly by FAO and UNDP as part of the Government framework for agricultural recovery.

Soybean: The area under soybean cultivation has expanded considerably in recent years, increasing from 63 000 hectares as recently as 2008 to 90 000 hectares in 2010. In a country in which diets are often protein-deficient, this trend is especially important.

Livestock: Government policy for the livestock sub-sector is to combine farm-scale and household-scale animal farming with main focus on ruminant species. Although livestock numbers decreased significantly in the 1990s (Table 2), there has been some recovery in the last few years.

Table 2: Livestock population, 2000- 2010 ('000 head)

	2001	2004	2008	2009	2010	% change	
						2010 over 2001	2010 over 2008
Cattle	570	576	576	576	577	1.2	0.2
Pigs	3 037	3 194	2 178	2 150	2 248	-26	3.2
Sheep	189	171	167	165	166	-12.2	-0.6
Goats	2 566	2 736	3 441	3 510	3 556	38.6	3.3
Rabbits	19 455	19 677	26 467	28 500	28 571	46.9	7.9
Chickens	15 804	18 729	14 071	13 859	14 943	-5.4	6.2
Ducks	3 158	5 189	5 878	5 901	5 936	88	1
Geese	1 090	1 580	1 477	1 355	1 626	49.2	10.1

Source: MoA

Other crops: Other important crops produced in DPR Korea include sorghum, millet, buckwheat, vegetables (mainly cabbage, spinach, radish, cucumber, eggplant and tomato) and fruit (mainly apples, pears, peaches, apricots and persimmons). Many farms also have sizeable mulberry plantations. The area under minor cereals and grains such as sorghum, millet and buckwheat is about 12 600 hectares.

Household gardens: Each cooperative farm household is entitled to a kitchen garden of 30 *pyong*, which equates to about 100 m². A typical pattern of cultivation in these gardens is an early crop of potatoes and green maize, followed by vegetables such as cabbage, peppers, radish and garlic. The main purpose and usage of household garden is to allow individual families to produce vegetables for their own consumption. Hence the contribution of kitchen gardens to the total food production in terms of cereal equivalent is relatively small and their importance is more likely to be in the area of nutrition and household income. Gardens also support a variety of small livestock including rabbits, pigs, goats and poultry which contribute significantly to the household's nutrition and income.

Crop production on sloping land: Most sloping-land soils may be assumed to be shallow, of low fertility and subject to accelerated erosion. Considering little economic efficiency in crop production on sloping land and negative environmental impacts like soil loss, the Government targets at reforestation of sloping lands.

Vegetables: Vegetables provide an extremely important source of vitamins and minerals and are an important part of the stable diet. In both rural and urban areas, cabbage

and other vegetables are produced for side dishes and preservation as "*kimchi*", which is consumed with rice or other staples throughout the year.

2.2.3 Food and nutritional security

Food and nutritional insecurity is a critical issue to be addressed in DPR Korea. Major health problems in recent years are mostly related to deficiency in nutritional value of the foods consumed. While food insecurity (mainly expressed in the form of cereal supply and consumption) has been the major issue needing urgent measures and, hence, attracted major concern of the Government

Undernutrition continues to bring down the quality of life of the population of the DPR Korea with negative effects on health and productivity. In order to achieve MDG 1 (eradicate extreme poverty and hunger), the United Nations and the Government recognize that nutrition concerns must be addressed in a more strategic manner with simultaneous short and long-term interventions in areas of agricultural production, nutritional support/food assistance, and prevention and treatment of malnutrition.

Despite progress made in recent years, malnutrition rates are still high in the DPR Korea. Data from the Multi Indicator Cluster Survey (2009) indicate a 32.4 percent stunting rate in under-five children and wasting rates of 5.2 percent (down respectively from 45.2 and 10.4 percent in 2000).

With signs of improvement in food production and supply, the Government is making efforts to supply its population with foods not only with caloric value but also with sufficient nutritional value. To this end, the Government increases inputs for nutritionally-processed food products, vegetable and fruit production (for mineral and microelement nutrition), soybean production (for vegetable oil and protein nutrition), and livestock, capture fishery and aquaculture production (for animal protein nutrition).

Slight increase in national cereal production was reported in 2011. This was mainly due to the increased availability of fertilizer, fuel and electricity, and in spite of the adverse weather. The July-August floods in 2011 affected paddy crop and the subsequent typhoons particularly impacted the maize crop mainly in North and South Hwanghae, two of the important grain producing provinces. Soybean production in 2011 also increased. However, given the overall inadequacy of pulses, efforts should continue to increase the protein content of the diet.

2.2.4 Major challenges and constraints

The vicious cycle of natural disasters and shortages of agricultural inputs are the root cause of food insecurity in DPR Korea. The problem is the shortage of major inputs such as fertilizers, agricultural chemicals and petroleum products caused by economic sanctions and increases in prices in international markets.

One of the main challenges to food security is the severe food shortages during lean season (May-August when the major staple crops like rice and maize are under cultivation).

Further details on challenges and constraints can be found below under sections on various priority areas.

3. GOVERNMENT SECTORAL POLICY AND FAO'S COMPARATIVE ADVANTAGES

3.1 Current Government sectoral policy

"Sustainable food security and improvement of the quality of life" is a major concern of the Government of DPR Korea among its development priorities. . The basic principle of the Government policies for solving food problems is self-sufficiency in food. The Government aims at producing 7.0 million tons of cereal for the years to come (5.13 million tonnes in 2011), thus solving food problems and putting the food supply on a sustainable footing.

Agriculture is the basis for solution of food issue and is the gateway toward a powerful socialist state. Therefore, all available resources have been mobilized for agricultural work in the country. Major thrust areas in agriculture sector are: renovation in potato farming; improvement in farming systems on the principle of "the right crop on the right soil and the right crop in the right time"; development of double-cropping system; and improvement in seed breeding and multiplication

The Government has adopted strategies to meet its future cereal requirements, namely: cultivation of higher-yielding varieties; improvement in mechanization; introduction of more efficient, environmentally-sound soil and crop management practices; and increase in cultivating land area through land rezoning and reclamation of tidal land.

The following sectoral policies have been set:

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

With a view to addressing food issues, the Government is increasing its investment in the agricultural sector and all other economic sectors are requested to support the agriculture sector and rural population by providing materials necessary for farming. In particular, double-cropping (with wheat/barley and potato as early crops) is focused as a major means to tackle food shortages in lean season whilst improving land utility.

3.2 Prospects for trade in agricultural products

Until the late 1980s, trade was done predominantly with the former Soviet Union and steadily increased with China and ex-Eastern Bloc countries.

The country faces serious obstacles to commercially import larger quantities of food grains and farming materials to meet the growing needs. In the last few years, international prices of grains and farming materials have also increased sharply.

Therefore the solution lies on production, coupled with the export of diversified and value-added agro-products acceptable in both traditional and new markets.

3.3 FAO comparative advantages in the DPR Korea

FAO has been providing technical support to DPR Korea for well over three decades. FAO is normally the focal point for the United Nation's *Agriculture/Food Security Theme Group* and its *Sub-group on Sloping Land Management*, which are overseen by the UN Resident Coordinator. Over the last three decades, about 200 field projects assisted by FAO have received total funding valued at USD 64.4 million.

FAO has supported the DPR Korea's efforts to achieve food security through technical assistance in areas such as agro-forestry, soybean cultivation, fruit production, marine aquaculture and capacity building.

FAO has also supported rehabilitation activities related to double-cropping, conservation agriculture, horticulture and the prevention of transboundary animal diseases such as avian influenza and foot-and-mouth disease. Policy-makers, government staff and researchers in the DPR Korea have benefited from various international study tours and regional FAO programmes that have enabled the exchange of experiences and expertise.

In particular, support through FAO Technical Cooperation Programme (TCP) has been significant. During the early years of 1985-2000, more than 50 FAO funded TCP projects were implemented in response to urgent requests from the Government for emergency as well as technical assistance in various areas of agriculture, livestock, forestry and fisheries. Adopting more comprehensive programme approaches since the second half of the 1990s, FAO assistance increasingly focused on flood control and both immediate and longer term aspects of double cropping development – with funding of USD 3 million under the Office for Special Relief Operations (OSRO), supplemented by USD 2.1 million funding from Italy for two phases of the Special Programme for Food Security (SPFS). There are some success stories as follows:

Impressive impact on conservation agriculture: In view of the fact that land for agricultural production in the DPR Korea is extremely limited, the Government requested FAO to provide technical assistance for introduction of conservation agriculture to address the problems. FAO conservation agriculture programme has been expanded to dozens of cooperative farms which apply it to some thousands hectares of cropland with increasing success. Techniques for no-tillage-direct-seeding and transplanting of rice without harrowing were developed, resulting in increased yields and significant savings in fuel and labor. Several farms are experimenting good results with no-tillage potato, grown on the soil surface under a cover of rice straw as double crop with rice. Conservation agriculture was also applied to horticulture crops such as cabbage, which is a very important food crop in DPR Korea. FAO TCP project has initiated the development of conservation agriculture which contributed to achieve food security and sustainable agricultural production in the future.

FAO, WFP and IFAD collaboration: The three agencies have collaborated in seasonal crop assessments, in the provision of emergency food and agriculture inputs, in the rehabilitation of crops, livestock and infrastructure, and in the investigation of future investment needs. Since December 1995, FAO and WFP have been conducting a *Joint Crop*

and Food Supply Assessment Mission every year. These assessments, the only regular UN food studies conducted in the country since the food crisis began, help FAO, IFAD and WFP to determine the impact of the food aid and crop production programmes in the country and to plan future interventions. In December 1995, IFAD approved the first international loan for DPR Korea, a Sericulture Development Project. Subsequently in 1997, all three agencies collaborated in designing a project to rehabilitate rice and maize production in the short term and promote livestock development overall.

Improvement in potato farming: FAO, CFC (Common Fund for Commodities) and CIP (International Potato Center) developed in 2008 a project with a budget of USD 3.5 million. This project brought national and international research institutions and potato farmers together to improve all aspects of the industry from seed to storage. It identified low-yielding varieties, poor quality seed and big storage losses as some of the key areas for action. While the project was not intended to achieve food security through potato alone, it gives due importance to the role of potato in the wider drive to alleviate hunger. And, in spite of weather shocks and food shortages, FAO expects that potato will now play a significant role in DPR Korea's food security in the long term.

3.4 Review of UNSF and national MDGs

3.4.1 Review of UN Strategic Framework (2011-2015)

The overall objective of the United Nations Strategic Framework is to support the Government in its endeavor to improve the quality of life of the people, ensure sustainable development and achieve progress towards the MDGs. The United Nations will draw on its comparative advantage and the synergies within the system by piloting joint programmes, monitoring and evaluation activities and harmonizing fund-raising, where appropriate.

The Strategic Framework outlined the following four strategic priority areas:

1. Strategic Priority One: Social Development
2. Strategic Priority Two: Partnerships for Knowledge and Development Management
3. Strategic Priority Three: Nutrition
4. Strategic Priority Four: Climate Change and Environment

All of these priority areas are interlinked as the achievement of each of the four outcomes will have a positive effect on all other priorities. Cross-cutting themes such as gender, sustained economic growth, availability of data, disaster risk reduction and improved access to international best practices and technical know-how have also been taken into account to ensure a sustainable development process.

The volume of resources required to accomplish the envisaged tasks has been estimated at approximately USD 288.3 million, excluding WFP operations. Much of the success of the UNSF in meeting the targets will be contingent upon the availability of adequate resources for the proposed activities under each of the strategic priority areas.

Under the Strategic Priority Three (Nutrition), it is underscored that in order to achieve MDG 1 (eradicate extreme poverty and hunger) the United Nations and the Government recognize that nutrition concerns must be addressed in a more strategic manner with

simultaneous short and long-term interventions in areas of agricultural production, nutritional support/food assistance, and prevention and treatment of malnutrition.

The current problem of undernutrition is a direct consequence of the recurring food shortages suffered by the country since the mid-1990s. In addition to geographical and climatic constraints, production in both the early and main cropping seasons is severely limited by a number of factors, including input shortages; availability and repair of mechanized equipment; availability of quality seeds, fertilizer, pesticides, fuel and plastic sheeting; as well as labor shortages. The disturbing trend in recent years has also been food imports (both in commercial and food aid) increasingly failing to off-set the cereal shortfalls, thus presenting further challenges for vulnerable groups within the country.

The heavy emphasis on cereal production has also dietary repercussions. Whilst soybean cultivation has expanded in recent years, there is still a shortage of protein and oil, leading to insufficient energy density and low digestibility. The inadequacy of the people's diet also translates into widespread micronutrient deficiencies

The UNSF (2011-2015) aims at achieving two key outcomes for nutrition:

- Improved nutritional status of targeted population to enable them to lead healthy lives
- Sustained household level food security

Through targeted support, the United Nations will assist the Government to, among others, strengthen capacity and support activities to boost food production in the country; support livestock reproduction and horticulture development; promote recovery of coastal fisheries and development of inland fisheries; develop infrastructures related to agriculture, environment and flood protection through food for community development; and strengthen national capacity for food security assessment and monitoring.

Major national institutions involved in nutrition and food security include the Ministry of Foreign Affairs, the National Coordinating Committees for WFP, FAO and UNICEF, Ministry of Agriculture, Ministry of Fisheries, Ministry of Food Administration, Ministry of Land and Environmental Protection, Ministry of Commerce, Ministry of Public Health, State Planning Commission, State Science and Technology Commission and other academic institutions. WFP, UNICEF, FAO and ESCAP are the United Nations entities that will assume the principal role in nutrition outcome areas and interventions.

3.4.2 Millennium Development Goals and social development

Instead of a full common country assessment (CCA) process, the United Nations Country Team (UNCT) agreed to carry out sectoral analyses for sectors of the United Nations expertise and engagement in the DPR Korea, and to focus on the country's situation with regard to the MDGs and other internationally agreed treaty obligations, and United Nations conferences and development goals.

The country is making progress in achieving MDGs, especially on MDG 2, on primary education, and MDG 3, on gender equality. From the UNFPA-supported 2008 census and UNICEF-supported 2009 Multiple Indicator Cluster Survey, school attendance rate was recorded as 100 per cent. However, the infant mortality rate of 14.1 per 1,000 live births in

1993 increased to 19.3 in 2008. On the other hand, maternal mortality ratio has fallen by about 19 percent from 105 maternal deaths per 100,000 live births in 1997 to 85.1 in 2008. The Government has set a target to achieve MDGs 4 and 5, respectively, by reducing infant mortality ratios by two-thirds and maternal mortality ratios by three-quarters by 2015. Other findings are that life expectancy is 69.3 years, lower than the 72.7 recorded in the last census conducted in 1993 and that the country's age profile has changed from young to old with the elderly population at 13.1 per cent of the total. More progress is required for meeting MDG 7, on environment, and MDG 8, on global partnerships for development.

In line with UN MDGs, the Government set up National Development Goals (National MDGs) to be achieved by 2015. These are a total of eight National MDGs, each with its own targets.

Goal One: Improve Living Standard of People: Goal One has four targets: i) ensuring food security; ii) achieving full and rational employment and decent work for all, including women and young people; iii) reducing by half the proportion of households living in shared dwellings; and iv) improving sustainable energy use.

Goal Two: Strengthen Universal 11-Year Compulsory Education: Goal Two has one target of achieving significant improvement in the quality of school education for all boys and girls alike.

Goal Three: Promote Gender Equality and Empower Women: Goal Three has two targets: i) ensuring gender equality to the maximum in all levels of education; and ii) empowering women through political and economic opportunities.

Goal Four: Reduce Child Mortality: Goal Four has one target of reducing by two-thirds the mortality rate among under-five children.

Goal Five: Improve Maternal Health: Goal Five has two targets: i) reducing by half the maternal mortality ratio; and ii) achieving universal access to reproductive health by 2015.

Goal Six: Combat HIV/AIDS, Malaria and other Diseases: Goal Six has one target of enhancing advocacy on HIV/AIDS, halting and beginning to reverse the incidence of malaria and other major diseases.

Goal Seven: Ensure Environmental Sustainability: Goal Seven has two targets: i) reducing biodiversity loss; and ii) providing access to safe drinking water and improved sanitation facilities.

Goal Eight: Develop a Global Partnership for Development: Goal Eight has two targets: i) enhancing cooperation to provide access to medical services; and ii) developing modern information and communication systems to increase provisions of access to those services.

3.4.3 Gender

According to the UNFPA 2008 census, females comprise 51.3 percent of the population. In primary and secondary education, women have equal access. However, with regard to higher education, one of every six men while only one of every 10 women above the

age of 16 has completed university education. Women comprise 52.5 per cent of the workforce in agriculture (including fishery and forestry) and dominate the retail trade sector. Women are well represented in the Government and the National Assembly at various levels and in agricultural sector, farm management in particular, most of managing jobs are occupied by females, which reflects superiority of females over males in their capacity.

Government of DPR Korea ensures that women have equal rights as men and take part in all fields of social life including politics, the economy and culture. Females account for 44 percent of those with any qualification.

The gender differences in qualifications can be explained by preferences for occupations and related fields of studies. For example, more men choose qualifications in engineering while more women choose qualifications in education, healthcare, arts, services and finance.

3.5 Governmental strategic objectives in food and agricultural sector

Considering its developmental needs and actual situation, the Government identified the following five governmental strategic objectives in food and agriculture sector (refer to Section 4, Priority Areas below and [Annex 1](#)), all of which are interlinked as the achievements of each priority outcome will have a positive effect on all other priorities. Cross-cutting themes such as gender, access to international best practices and technical know-how, multi-disciplinary collaboration and multi-sectoral cooperation have also been taken into account to ensure a sustainable development process. Each strategic objective is related to global MDGs, National MDGs (NMDGs), UNSF and FAO Regional Priorities (FAORP). Every objective has componential or functional key partners ([Annex 2](#)).

3.6 Opportunities and functions of FAO in assisting DPR Korea

The vision of FAO is a world free of hunger and malnutrition where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner. FAO's Strategic Objectives are (FAOSOs):

- A) Sustainable intensification of crop production;
- B) Increased sustainable livestock production;
- C) Sustainable management and use of fisheries and aquaculture;
- D) Improved quality and safety of food at all stages of the food chain;
- E) Sustainable management of forests and trees;
- F) Sustainable management of land, water and genetic resources and improved responses to global environmental challenges affecting food and agriculture;
- G) Enabling environment for markets to improve livelihoods and rural development;
- H) Improved food security and better nutrition;
- I) Improved preparedness for, and effective responses to, food and agricultural threats and emergencies;
- K) Gender equity in access to resources, goods, services and decision-making in the rural areas; and

- L) Increased and more effective public and private investment in agriculture and rural development.

The vision of FAO Regional Office for Asia and the Pacific (RAP) is the food-secure Asia-Pacific Region and its mission is to help member countries halve the number of undernourished people in the region by 2015 by raising agricultural productivity and alleviating poverty while protecting the region's natural resources base.

The three overarching global goals comprising the basic foundations of the Regional Priority Framework for Asia and the Pacific 2010-2019 (RPFAP) are: A) reduction of the absolute number of people suffering from hunger and malnutrition and progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life; B) elimination of poverty and the driving forward of economic and social progress for all with increased food production, enhanced rural development and sustainable livelihoods; and C) sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations.

Five strategic priority areas identified in the above RPFAP are:

- A) Strengthening food and nutritional security;
- B) Fostering agricultural production and rural development;
- C) Enhancing equitable, productive and sustainable natural resource management and utilization;
- D) Improving capacity to respond to food and agricultural threats and emergencies; and
- E) Coping with the impact of climate change on food and agriculture.

The core functions of FAO that are relevant to food and agriculture sector in DPR Korea are:

- a) Monitoring and assessment of long-term and medium-term trends and perspectives;
- b) Assembly and provision of information, knowledge and statistics;
- c) Development of international instruments, norm and standards;
- d) Policy and strategy options, and advice;
- e) Technical support to promote technology transfer and build capacity;
- f) Advocacy and communication;
- g) Inter-disciplinarity and innovation; and
- h) Partnerships and alliance.

All the above mentioned FAO objectives and functions should be linked to strategic objectives (priorities) of the Government of DPR Korea and clearly reflected in the process of identifying and formulating cooperation programmes and projects for 2012-2015. All the CPF priority areas identified heavily draw assistance from FAO for capacity building and technical support. The priority areas needing international development cooperation require building partnerships with other countries, with FAO acting as a facilitating and coordinating agency in developing food and agriculture sector. FAO assistance will lend support to all CPF priorities.

FAO's comparative advantages lie on tackling critical issues through its

country/regional offices and the headquarters. FAO can provide additional knowledge and skills to DPR Korea with dedicated experts, mobilizing resources from the Working Groups and Task Forces. FAO can also provide technical support for food/agriculture-related programmes and projects financed by other international development agencies while raising funds from donors. FAO can implement global programmes and projects such as financed by the GEF.

4. PRIORITY AREAS OF COUNTRY PROGRAMMING FRAMEWORK (2012-2015)

4.1 Priority outcomes and outputs

4.1.1 Priority A: Strengthening national food and nutritional security

Development problems to be addressed

The Government of DPR Korea endeavors to increase national food production and guarantee national food security by attaining self-sufficiency in food supply. It concentrates its limited resources to food production gaining some successes. Food production in the country has shown trends of slight increases in recent years with increased governmental inputs. However, food production in DPR Korea is still off-track from governmental targets due to unfavorable climatic conditions and lack of input resources, resulting in national food insecurity for many consecutive years. The greatest immediate bottleneck to sustainable food security and increased agricultural productivity is the shortage of foreign exchange required to import essential inputs and raw materials for their further domestic manufacture.

Fertilizer is the most critical problem among all inputs. Historically, most fertilizer was domestically produced. Since the early 1990s, both imported and locally produced fertilizer supplies have progressively declined and crop yields have almost halved. All other agricultural inputs, including fuel, pesticides, herbicides, machinery and related spare parts as well as to plastic sheets, are also in short supply.

At present 263 000 tonnes of certified seed is being annually produced through 241 co-operative seed farms under the seed certification system. However, it may not be easy to raise the quality of seed due to the lack of seed testing facilities in the regional crop inspection centers, and lack of trained professionals with knowledge on modern seed and seed health testing procedures. Furthermore, the seed production farms are not properly equipped for seed production, seed conditioning and storage facilities. There is lack of appropriate early maturing varieties suitable to promote double cropping. Of the above-mentioned 263 000 tonnes, the percentage of seed of acceptable quality supplied according to international standards is estimated at 13 percent. Due to the lack of appropriate cleaning and processing facilities, seed farmers fail to meet the international standards in terms of germination rate, moisture and impurities.

Current post-harvest losses are estimated to be approximately 15 percent of the national production in DPR Korea. The problems that currently exist in the post-harvest sector span a wide range of functions and disciplines. Most of the ultimate problems are technological in nature - inadequate drying leading to losses in quality, less efficient mills

resulting in a high percentage of broken grains, and inadequate threshing machines that result in lost grain. In addition, there are also non-technological constraints that lead to delays in drying the crops. For example, lack of transportation facilities and fuel.

Nutrition insecurity is another issue to be addressed in DPR Korea. Major health problems in recent years are mostly related with deficiency in nutritional value of the food consumed.

With signs of improvement in food production and supply, the Government is making efforts to supply its population with foods not only with caloric value but also with foods that are rich with micro-nutrients. To this end, the Government increases inputs to diversify food products, with different varieties of vegetable and fruit production, soybean (for vegetable oil and protein nutrition), livestock, and capture fishery and aquaculture production (for animal protein). As part of a comprehensive approach to achieving improved household food security and nutritional levels among vulnerable populations, improving nutritional knowledge and practices are essential to achieving health and nutrition. While availability and access to food can be addressed through improved agricultural productivity and diversification of food crops, education and knowledge dissemination on nutrition, food utilization and improved family feeding practices are required to improve people's nutritional status in the longer term.

Household food security is an important element that not only contributes to nutrition but also links to social protection. Improving access to basic food and other essentials are of crucial importance for rural households unable to meet their essential needs through their own production, purchase or traditional coping mechanisms. However, there are rooms to improve food safety/quality inspection, testing and certification capacities in DPR Korea to some extent.

Outcome A1: Increased food production

Output A1-1: Enhanced capacity of seed farms to introduce superior varieties

Output A1-2: Integrated cyclic crop and livestock production system extended

Output A1-3: Modern cultivation technologies introduced

Output A1-4: Models for small-scale irrigation systems developed and on farm storage and machinery maintenance improved

Output A1-5: Improved double cropping systems with emphasis on potatoes and best practices for agro-forestry developed

Outcome A2: Reduced food loss in production and supply chains

Output A2-1: Best practices for reduced on-farm post-harvest loss developed

Output A2-2: New technologies for reducing food loss during storage introduced

Output A2-3: Technologies for reducing food loss at supply chains introduced

Outcome A3: Increased production of unprocessed foodstuff with higher nutritional value

Output A3-1: Enhanced capacity of vegetable seed institutes to introduce and develop superior varieties

Output A3-2: New technologies for increasing fruit production introduced

Output A3-3: Intensive livestock production and animal health systems introduced and developed

Output A3-4: New technologies for increasing marine and freshwater aquaculture introduced

Outcome A4: Improved food processing with higher nutritional value

Output A4-1: New technologies for on-farm food processing technologies introduced

Output A4-2: Strengthened small-scale food processing capacity with new technologies

Outcome A5: Improved knowledge, attitudes, practices and behaviors related to nutrition leading to improved nutritional intakes and better dietary utilization

Output A5-1 Improved dietary quality/diversity using locally available and affordable foods

Outcome A-6 Improved food safety at all stages of the food chain

Output A-6.1 Strengthened food quality control

Output A-6.2 Strengthened inspection, testing and certification capacities

Output A-6.3 Strengthened capacity of stakeholders for implementing food safety/ quality control regulations

4.1.2 Priority B: Improving natural resource management
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Development problems to be addressed

The Government pays due attention to the issue of protection of land and environment and increases its inputs for sustainable natural resources management and environmental rehabilitation. It initiated national campaign for land and environmental protection and mobilizes entire nation. Major gaps concerning the issue lie in lack of input resources as well as lack of technological capacity.

The shortage of arable land has helped in developing a strong policy in efficient land use planning as well as land and resource utilization. The fertility of most of the soils is low due to loss of nutrients through erosion on sloping lands and long periods of cultivation. Agro-forestry is regarded as one solution to restore the deforested slopes around community residential areas. Thus MoLEP is to set up agro-forestry areas based on defined agro-forestry standards and public awareness on agro-forestry practices.

Research needs to be conducted and institutions need to be strengthened in environmental protection, enforcement and monitoring. A sustainable balance needs to be restored and maintained between agricultural and other land uses, between annual and perennial crops, irrigated and rain-fed agriculture, productive and protective forests.

The shortage of power and spare parts in irrigation facilities caused by the economic difficulties has been led to the construction of gravity fed irrigation systems. However, the country needs advanced irrigation facilities for maize and other field crops in order to tackle the dry-spell impacts on crop productivity.

While irrigation for lowland paddy is of critical importance to achieve high yields, the case for high irrigation intensities in upland areas is less compelling. Upland crops are, by nature, rain-fed crops in DPR Korea. Water is often needed only during critical periods of certain crops, such as during maize transplanting and during occasional dry spells in summer. In such situations alternative solutions to fully equipped new irrigation systems could in the long run be economically preferable. Such solutions could include a change of cropping patterns towards a more drought resistant mix, accepting to pay the price of year-to-year yield fluctuations in return for savings in capital cost.

Outcome B1: Improved land use

Output B1-1: Enhanced capacity for land resources management

Output B1-2: Enhanced capacity for land use planning

Output B1-3: Enhanced capacity for integrated use of mountains

Output B1-4: Enhanced capacity for integrated sloping land management

Outcome B2: Improved forest management

Output B2-1: Enhanced sustainable forestry management

Output B2-2: Effective technologies to improve renewal forests introduced

Output B2-3: Enhanced capacity for improving timber processing and utility

Output B2-4: Improved cyclic timber production system

Outcome B3: Improved water use

Output B3-1: Enhanced capacity for improving water pollution

- Output B3-2: Advanced technologies for improving water resource management introduced
- Output B3-3: New technologies for improving water utility rate introduced
- Outcome B4: Improved nature reserve management and bio-diversity conservation**
- Output B4-1: Improved nature reserve management
- Output B4-2: Strengthened institutional capacity for the protection and rational use of wetland
- Output B4-3: Improved bio-diversity conservation

4.1.3 Priority C: Improved rural livelihood
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Development problems to be addressed

DPR Korea rural sector has great needs and potentials to improve rural livelihood. Improvement in rural livelihood can be called a supporting pillar for reducing food and nutritional insecurity both in rural and national scale.

The Government of DPR Korea endeavors to improve rural livelihood through intensified and diversified productive operations in rural sector with the principle of establishing science-based processes. Major governmental approaches to improve rural livelihood target at diversified and increased income generation and at improved living conditions in rural communities.

Issues to be addressed in the field of diversified and increased income generation are: i) improved cash crop products suitable to ecological and socio-economic contexts specific to different rural areas; ii) increased number of processed or unprocessed rural products with more value added; iii) improved rural by-product utility for self- or service consumption; and iv) intensified efforts to produce new products and jobs.

Issues to be addressed in the field of improved living conditions are: i) improved dwelling conditions including energy supply of a more economic way suitable to natural and socio-economic conditions specific to different regions; and ii) quality-improved water supply and sanitation in rural communities.

To cope with the energy shortages, the construction of the small-medium hydro power plants was successively conducted in the eastern and northern parts of the country, enabling adjacent rural areas to benefit from electrical power for heating and irrigation purposes.

Outcome C1: Diversified and increased rural income resources

- Output C1-1: Improved agro-business for promotion of crop by-products and rural household products

- Output C1-2: Enhanced capacity building for increasing industrial crop production
- Output C1-3: New technologies for increasing non-timber forest products introduced
- Output C1-4: New technologies for increasing timber byproducts introduced
- Outcome C2: Improved life environment for rural population**
- Output C2-1: New technologies to produce renewable energy for dwelling houses introduced

4.1.4 Priority D: Improved mitigation of the impact of climate change on agriculture and improved disaster management

Development problems to be addressed

The DPR Korea is seriously affected by climate change. During the last 100 years, temperature changes have affected rainfall patterns and brought frequent occurrences of extreme weather including floods and droughts, which in turn impacted on socio-economic development and people's livelihood.

The occurrence of frequent natural disasters, mostly caused by erratic and often extreme climatic conditions have significantly contributed to making agricultural production unstable and, hence, to insufficient food supply and national food insecurity in DPR Korea. Natural disasters have the effect of negative impacts twice on food and agricultural sector since these not only damage the crops in the current year but also the infrastructures and material basis for production in the subsequent years. Their impacts last long and, in many cases, extra budgets are needed for rehabilitation.

Mitigation and adaptation to climate changes are significant measures to rehabilitate degraded environment, to protect land and environment, to prevent serious impacts of natural disasters, and to guarantee national food security. For over a decade, the Government has been making strenuous efforts to accelerate the process at various sectors and levels.

- Outcome D1: Mitigation practices to cope with the impact of climate change improved**
- Output D1-1: Natural disaster early-warning and immediate-responding systems improved
- Output D1-2: Technical capacity for assessment of the impacts of climate change on agriculture improved
- Output D1-3: Mitigation practices improved
- Output D1-4: National REDD plan developed

Output D1-5: Integrated coast management improved

Output D1-6: Integrated watershed management improved

4.1.5 Priority E: Improvement in institutional capacity for agricultural research, extension and administration
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Development problems to be addressed

Major problems to be addressed and gaps to be bridged in development of DPR Korea agriculture and rural sector are of technological character. Hence, technological innovation can serve as a major means in developing DPR Korea agriculture and rural sector.

The Government endeavors to strengthen agricultural research and extension institutions and improve their roles and functions in renovating the sector. Major constraints in the field are lack of knowledge and institutional capacity building to establish and operate modern research and extension service mechanisms in conformity with ever-changing field needs and circumstances.

Improvement in administration is key to any success but it is of vital importance for sustainable development of food and agricultural sector where many stakeholders including ministries operate together.

The Government endeavors to improve institutional capacity for agricultural/rural administration through capacity building in different governmental agencies related to the sector. Special attention is directed to planning and statistics.

Outcome E1: Improved agricultural research capacity

Output E1-1: Enhanced food-security-related research capacity

Output E1-2: Enhanced nutrition-security-related research capacity

Output E1-3: Enhanced resource-management-related research capacity

Outcome E2: Improved agricultural extension capacity

Output E2-1: Enhanced national extension net

Output E2-2: Efficient extension materials and methods developed

Outcome E3: Improved agricultural administration capacity

Output E3-1: Existing procedures improved

Output E3-2: Enhanced planning capacity through introducing advanced planning tools and approaches

Output E3-3: Enhanced statistical capacity through introducing advanced statistical

tools and approaches

Output E3-4: Agro-information system established

Output E3-5: Enhanced project cycle management capacity

Outcome E4: Improved food security risk management

Output E4-1: Risk assessment capacity improved

Output E4-2: Risk management capacity improved

4.2 CPF results and resource requirements

Programmes and projects for implementing CPF and achieving priority outputs have been identified through a process of intensive consultations among the Government authorities, agencies and institutions, and FAO and international development partners based in Pyongyang. Quite naturally, these should be fully flexible to add or modify priorities, as there may be some unexpected changes in situation during the implementation stage. In this regard, the CPF should be a living document that can be modified on agreement between the Government and FAO in conformity with changing situation.

The budget for programmes and projects to implement the CPF draws from three sources: FAO, the Government and international development partners. FAO's own resources are from Technical Cooperation Programme (TCP), and Technical Cooperation Programme Facility (TCPF). TCP finances up to USD 500 000 per medium-scale project, and TCPF finances up to USD 200 000 per small-scale project such as formulation of project proposals, specific assessments and studies, and other quick interventions. Other donors include Trust Funds from external donors, IFIs, Global Environmental Facility and other external sources. Contributions by the Government will lead to higher outputs and expanded outcomes for the CPF.

In all, for the five priority areas, there are 94 programmes/projects. Titles of programmes and projects, and estimated financial resources required are indicated in **Annex 3**.

For each CPF priority outcome and output, respective indicators, baseline and targets are identified. Means of verification, risks and assumptions, and role of partners are then explained. The results matrix is given in **Annex 4**. Indicative resource requirements are also provided for each priority area.

5. IMPLEMENTATION, MONITORING AND EVALUATION

A critical next step to implement the CPF will include building up a consensus with the Government, donors, IFIs and UN agencies about FAO's technical and administrative capacity to deliver on the above priority areas. This will require an intensive advocacy effort by the FAO Country Office. Subsequently, the main challenge would be to mobilize required resources. Both these actions have to be provided strong support by the FAO Regional Office

and Headquarters.

5.1 Implementation mechanism

The CPF is co-owned by the Government of DPR Korea and FAO and the coordination and implementation mechanism is established based on this basic principle. Overall responsibility for the implementation of the CPF will rest with the FAO Country Office.

The National Committee for FAO (NCFAO) consisting of representatives from over 10 ministries/commissions/bureaus will be the coordinating body to oversee effective implementation of the CPF and to make policy-level decisions.

The CPF Implementation Committee will be formed to oversee effective implementation of the CPF, provide policy directions and evaluate its progress. The CPF Implementation Committee will consist of representatives of line ministries and commissions/bureaus such as MoF, MoA, MoFi, MoFo, MoLEP, SPC, SCST, CBS, AAS and (if necessary) other concerned institutions. The CPF Implementation Committee would be co-chaired by the Secretary-General of the NCFAO and FAO. At the working level, the CPF *ad hoc* committees will be formed as required in line with decisions of the Implementation Committee.

The CPF Implementation Committee will report to the NCFAO and will take decisions on the implementation of the CPF within the approved framework and work plan, while matters requiring policy decisions will be referred to and decided by the NCFAO. A periodic meeting of the CPF Implementation Committee will be organized once every six months, while an *ad hoc* meeting can take place at the request of the Chairperson.

5.2 Monitoring and evaluation

Monitoring and evaluation will take place at three levels. First is within projects, ensuring first that the goals and objectives of each projects are contributing to the CPF Outputs significantly and directly. Each project has its own M&E and reporting cycle defined by FAO's normative regulation and in line with agreements with donors. Project baseline data and indicators will correspond with targets and indicators of the CPF and incorporated directly into each project. At a second level, CPF outputs and indicators will be monitored on a six-monthly and an annual basis. The six-monthly report will be short and will only note any issues that may need quick attention while the annual report will be more detailed. These will be presented in ways similar to reporting on project logical frameworks.

FAO, jointly with CBS, will prepare an annual progress report of the implementation of the CPF which will be discussed at the annual CPF Implementation Review Workshop, prior to its finalization and submission to the CPF Implementation Committee for clearance and further submission to the NCFAO.

The CPF Implementation Review Workshop will be organized once every year to review and evaluate the effectiveness of the implementation and make necessary adjustments to the CPF document if required, with the participation of the members of the CPF Implementation Committee and the representatives of other concerned institutions (**Annex 5**). This annual workshop will review FAO's work and provide guidance and help as necessary.

The annual progress reports will also be shared with the UNCT and the UN Resident Coordinator.

A mid-term review of the CPF will be carried out with the assistance of the FAO Regional Office for Asia and the Pacific to assess whether the CPF is on track or if major changes need to be made in response to changing circumstances in 2014. A final review of the CPF will be made at the time of preparation of the next CPF in 2015.

5.3 Short-term implementation plan

The short-term implementation plan covers one year, including the formation of the implementation committee, preparation of the progress report, etc.

During this short-term implementation plan, the CPF will be reviewed and adjusted, work plans developed on an annual basis, progress reviewed quarterly and annual progress reports prepared. Main activities are expected to be under implementation in 2013 in accordance with funding availability. Implementation of major activities will continue through the second biennium.

The CPF will be submitted to the NCFAO for endorsement in August 2012. After the approval of CPF, each partner institution will provide the programme and project proposals for possible implementation in fiscal year 2012.

Following the signature on the CPF, the CPF Implementation Committee will be convened to prioritize programmes and projects, the result of which will be proposed to the NCFAO. After clearance by the NCFAO, the selected programmes and project proposals for 2012 will be submitted to FAO for financing. FAO will consider funding the programmes and projects classified as top priority. Once projects are approved by FAO, the line-Ministries request counter-part funding from the Government.

In addition, FAO together with the Government of DPR Korea will approach potential donors and funding sources to finance priority programmes and projects. Adjustments may need to be made, since budget allocation is likely to be smaller than what is asked for. The detailed short-term implementation plan for the initial 12 months is attached as **Annex 6**. At the start of the fiscal year 2013, the first group of programmes and projects will be launched for implementation. Planning for the fiscal year 2013 will commence in November 2012.

CPF Priorities Matrix

Priority Areas	Outcome	Output	Indicative Activities	
A: Strengthening national food and nutritional security	A1: Increased food production	A1-1: Enhanced capacity of seed farms to introduce superior varieties	Improved species and varieties will be introduced to various cooperative farms.	
		A1-2: Integrated cyclic crop and livestock production system evaluated and extended	Seed quality control will be intensified at seed farms.	
			Integrated cyclic crop and livestock production in different circumstances will be evaluated and best practices will be selected for extension.	
			Integrated crop-livestock-aquaculture production model will be evaluated.	
		A1-3: Modern cultivation technologies introduced	Conservation agriculture will be extended to various contexts.	
	A2: Reduced food loss in production and supply chains	A2-1: Best practices for reduced on-farm post-harvest loss developed	Balanced fertilization and integrated plant nutrient management	Balanced fertilization and integrated plant nutrient management
			Organic farming technologies suitable to different contexts will be developed.	Organic farming technologies suitable to different contexts will be developed.
			System of rice intensification will be evaluated.	System of rice intensification will be evaluated.
			Best practices for IPM and ICM technologies will be developed.	Best practices for IPM and ICM technologies will be developed.
			Models for small-scale on-farm irrigation systems will be developed.	Models for small-scale on-farm irrigation systems will be developed.
	A3: Increased production of unprocessed foodstuff with higher nutritional value	A3-1: Enhanced capacity of vegetable seed institutes to introduce and develop superior varieties	Best practices for on-farm seed, cereal and vegetable storage and machinery maintenance systems will be developed.	Best practices for on-farm seed, cereal and vegetable storage and machinery maintenance systems will be developed.
			Double-cropping technologies with emphasis on potatoes will be further enhanced.	Double-cropping technologies with emphasis on potatoes will be further enhanced.
			Best practices for agro-forestry will be developed and extended.	Best practices for agro-forestry will be developed and extended.
			On-field crop management at time of harvest will be improved.	On-field crop management at time of harvest will be improved.
			Best practices for transport and threshing will be developed.	Best practices for transport and threshing will be developed.
A3: Increased production of unprocessed foodstuff with higher nutritional value	A3-2: New technologies for increasing fruit production introduced	Best practices for drying harvested crops and threshed grains will be developed.	Best practices for drying harvested crops and threshed grains will be developed.	
		Technologies to reduce contamination during storage will be introduced.	Technologies to reduce contamination during storage will be introduced.	
		Technologies to improve and maintain storage facilities will be introduced.	Technologies to improve and maintain storage facilities will be introduced.	
		Technologies for packing and transport will be introduced.	Technologies for packing and transport will be introduced.	
		Facility cultivation technologies will be introduced.	Facility cultivation technologies will be introduced.	
A3: Increased production of unprocessed foodstuff with higher nutritional value	A3-2: New technologies for increasing fruit production introduced	Intensive and improved vegetable seed production technologies will be introduced.	Intensive and improved vegetable seed production technologies will be introduced.	
		Introduction of new vegetable species for balanced diet	Introduction of new vegetable species for balanced diet	
		Fruit sapling productivity for intensive fruit production will be improved with introduction of modern technologies.	Fruit sapling productivity for intensive fruit production will be improved with introduction of modern technologies.	
		Fruit cultivation technologies including pruning will be innovated.	Fruit cultivation technologies including pruning will be innovated.	
		Orchard farming of new fruit species will be introduced.	Orchard farming of new fruit species will be introduced.	

	<p>A3-3: Intensive livestock production and animal health systems introduced and developed</p>	<p>Intensive livestock production will be further developed. Modern technologies for feed-processing and use will be introduced. Household livestock production will be promoted. Animal healthcare will be intensified especially for cross-boundary diseases. Productivity of capture fishery will be improved by updating technologies. New economic animal and plant aquaculture species and related technologies will be introduced. Freshwater aquaculture will be promoted nationwide. Marine aquaculture will be improved with innovative technologies. Innovative on-farm cereal-processing technologies for oil, powder and foodstuff will be introduced and extended. On-farm vegetable and fruit processing technologies will be developed. Technological innovation at county-level foodstuff plants will be further promoted. Technologies to process wild fruit on local basis will be updated. Promotion of consumption of vegetables and fruits through kitchen/school/clinic garden activities combined with nutrition education Promotion of appropriate family and young child complementary feeding practices with cooking demonstration and improved recipes</p>
	<p>A3-4: New technologies for increasing marine and freshwater aquaculture introduced</p>	<p>Freshwater aquaculture will be promoted nationwide. Marine aquaculture will be improved with innovative technologies. Innovative on-farm cereal-processing technologies for oil, powder and foodstuff will be introduced and extended. On-farm vegetable and fruit processing technologies will be developed. Technological innovation at county-level foodstuff plants will be further promoted. Technologies to process wild fruit on local basis will be updated. Promotion of consumption of vegetables and fruits through kitchen/school/clinic garden activities combined with nutrition education Promotion of appropriate family and young child complementary feeding practices with cooking demonstration and improved recipes</p>
<p>A4: Improved food processing with higher nutritional value</p>	<p>A4-1: New technologies for on-farm food processing technologies introduced</p>	<p>Technologies to process wild fruit on local basis will be updated. Promotion of consumption of vegetables and fruits through kitchen/school/clinic garden activities combined with nutrition education Promotion of appropriate family and young child complementary feeding practices with cooking demonstration and improved recipes</p>
<p>A5: Improved knowledge, attitudes, practices and behaviors related to nutrition leading to improved nutritional intakes and better dietary utilization</p>	<p>A4-2: Strengthened small-scale food processing capacity with new technologies</p>	<p>Technologies to process wild fruit on local basis will be updated. Promotion of consumption of vegetables and fruits through kitchen/school/clinic garden activities combined with nutrition education Promotion of appropriate family and young child complementary feeding practices with cooking demonstration and improved recipes</p>
<p>A 6: Improved food safety at all stages of the food chain</p>	<p>A5-1 Improved dietary quality/diversity using locally available and affordable foods</p>	<p>Technologies to process wild fruit on local basis will be updated. Promotion of consumption of vegetables and fruits through kitchen/school/clinic garden activities combined with nutrition education Promotion of appropriate family and young child complementary feeding practices with cooking demonstration and improved recipes</p>
	<p>A 6-1: Strengthened food quality control</p>	<p>Food quality control procedures will be reviewed and updated. Inspection and certification capacities will be reviewed and strengthened. Testing capacities will be reviewed and strengthened. Food quality control procedures for import will be reviewed and improved. Good practices of food quality control from farm to table through trainings to range of stakeholders will be strengthened</p>
	<p>A 6-2: Strengthened inspection, testing and certification capacities</p>	<p>Food quality control procedures will be reviewed and updated. Inspection and certification capacities will be reviewed and strengthened. Testing capacities will be reviewed and strengthened. Food quality control procedures for import will be reviewed and improved. Good practices of food quality control from farm to table through trainings to range of stakeholders will be strengthened</p>
	<p>A6-3: Strengthened capacity of stakeholders for implementing food safety/quality control procedures</p>	<p>Food quality control procedures will be reviewed and updated. Inspection and certification capacities will be reviewed and strengthened. Testing capacities will be reviewed and strengthened. Food quality control procedures for import will be reviewed and improved. Good practices of food quality control from farm to table through trainings to range of stakeholders will be strengthened</p>
<p>B: Improving natural resources management</p>	<p>B1: Improved land use</p>	<p>Technical capacity for land resources management will be intensified. Collaboration between agencies responsible for land resources management will be improved.</p>

			<p>Technical capacity for land use planning will be improved.</p> <p>Improved land use plan will be enforced in land resources development and management.</p> <p>Activities for integrated use of mountains for different local contexts will be strengthened.</p> <p>Balanced combination of resources conservation and income generation will be promoted through integrated use of mountains.</p> <p>Community-based activities for integrated use of mountains will be intensified.</p> <p>Best practices of sloping land management will be identified and extended.</p> <p>New technologies suitable for different contexts will be introduced and evaluated.</p> <p>International criteria and indicators of sustainable forestry management will be studied.</p> <p>sustainable forestry management system will be improved by various stakeholders.</p> <p>Sustainable forestry management activities will be taken.</p> <p>Effective technologies to manage coppice forests will be introduced and evaluated.</p> <p>Technical plan to manage sprout forests will be developed.</p> <p>Efficacy of timber processing will be improved with introduction of modern technologies.</p> <p>Volume of timber felling will be decreased producing more processed timber products.</p> <p>Nursery capacity at timber production stations will be intensified.</p> <p>Advanced technologies efficient for reforestation at mountainous timber production areas will be introduced.</p> <p>Economic species and varieties for timber production will be planted for reforestation on timber-produced areas.</p> <p>Technical capacity to measure water pollution will be intensified.</p> <p>Efficient technologies to reduce water pollution will be introduced.</p>
	B1-2: Enhanced capacity for land use planning		
	B1-3: Enhanced capacity for integrated use of mountains		
	B1-4: Enhanced capacity for integrated sloping land management		
	B2: Improved forestry management	B2-1: Enhanced sustainable forestry management procedures	
		B2-2: Effective technologies to improve renewal forests introduced	
		B2-3: Enhanced capacity for improving timber processing and utility	
		B2-4: Improved cyclic timber production system	
	B3: Improved water use	B3-1: Enhanced capacity for improving water pollution	
		B3-2: Advanced technologies for improving water resource management introduced	

			<p>B3-3: New technologies for improving water utility rate introduced</p> <p>B4-1: Improved nature reserve management</p> <p>B4-2: Strengthened institutional capacity for the protection and rational use of wetland</p> <p>B4-3: Improved capacity of bio-diversity conservation</p>	<p>Innovative technologies will be introduced to increase water utility rate.</p> <p>Water reserve and supply infrastructures will be repaired to improve efficacy.</p> <p>Small-scale irrigation projects will be promoted for efficacy increase.</p> <p>Nature reserve management will be improved by related agencies.</p> <p>Capacity building for community-based nature reserve management will be promoted.</p> <p>wetland protection, development and management will be improved</p> <p>Technical capacity building for wetland management will be promoted.</p> <p>Implementation of bio-diversity conservation plan will be reviewed and updated.</p> <p>Bio-diversity conservation will be improved through various activities..</p>		
C: Improving rural livelihood	C1: Diversified and increased rural income resources	C1-1: Improved agro-business for promotion of crop by-products and rural household products	C1-2: Enhanced capacity building for increasing industrial crop production	<p>C1-3: New technologies for increasing non-timber forest products introduced</p>	<p>Agro-business based on on-farm storage, processing and packing will be promoted.</p> <p>New crop by-products will be developed with more income value.</p> <p>Rural household livestock production will be promoted.</p>	
				C1-4: New technologies for increasing timber byproducts introduced	<p>Technologies for on-farm storage and primary processing will be introduced.</p> <p>Technologies for wild fruit production and processing will be introduced.</p> <p>Technologies for cultivating trees of higher economic value will be introduced.</p> <p>Technologies to improve cultivation of herbaceous plants including medicinal plants in forestry will be introduced.</p>	<p>Capacity building on industrial crop production for bio-fuel, fiber, sugar and edible oil will be promoted.</p> <p>New species with more economic value will be introduced.</p> <p>Charcoal producing technologies will be introduced in timber production stations.</p>
					<p>C2-1: New technologies to produce renewable energy for dwelling houses introduced</p>	<p>Technologies for timber byproduct processing including woodcrafts will be introduced.</p> <p>Technologies for household-level methane gas production and use will be extended.</p>

	population		Technologies for solar energy use will be introduced and extended. Technologies for community fuel forestry management will be developed and extended.
D: Coping with climate change	D1: Mitigation practices to cope with the impact of climate change improved	D1-1: Natural disaster early-warning and immediate-responding systems improved	Various natural disaster early-warning systems operating in other countries will be studied. Models of natural disaster early-warning system suitable to DPRK context will be tested and introduced.
			Various natural disaster immediate-responding systems operating in other countries will be studied. Models of disaster immediate-responding system suitable to DPRK will be tested and introduced.
			Technical capacity for assessing impacts of climate change in other countries is studied Work plan for assessing impacts of climate change will be developed and implemented in collaboration between related agencies. Institutional capacity building to mitigate impacts of climate change will be promoted. Better mitigation practices will be studied, developed and introduced.
			REDD activities in other countries will be studied
			National REDD plan will be developed.
			Better practices of integrated coast management in other countries are studied
			Integrated coast management is improved through different rehabilitation and development activities.
			Best practices of integrated watershed management will be identified and selected.
			D1-2: Technical capacity for assessment of the impacts of climate change on agriculture improved
			D1-3: Mitigation practices improved
			D1-4: National REDD plan developed
			D1-5: Integrated coast management improved
			D1-6: Integrated watershed management improved

			<p>Integrated watershed management procedures will be improved in collaboration with different stakeholders.</p>
<p>E: Strengthening institutional capacity for agricultural research, extension and administration</p>	<p>E1: Improved agricultural research capacity</p>	<p>E1-1: Enhanced food-security-related research capacity</p> <p>E1-2: Enhanced nutrition-security-related research capacity</p> <p>E1-3: Enhanced resource-management-related research capacity</p>	<p>Research capacity on soil fertility will be improved.</p> <p>Research capacity on efficient farm machinery will be improved.</p> <p>Research capacity on plant pathogen detection will be improved.</p> <p>Research capacity on animal feed production and supply will be improved.</p> <p>Research capacity on nutritionally-intensified food additives will be improved.</p> <p>Research capacity on nutritionally-intensified processed food will be improved.</p> <p>Research design capacity will be intensified.</p> <p>Experimental capacity both at lab and field will be intensified.</p> <p>Capacity to apply research results into field production will be intensified.</p> <p>Existing national extension net will be evaluated and improved.</p> <p>Measures will be taken to ensure regular and efficient operation of national extension net.</p> <p>Model for extension net at different levels will be created and operating.</p> <p>Actual extension needs of field will be accessed and analyzed.</p> <p>Efficient extension materials and methods will be developed and supplied by educational institutions</p> <p>Extension officers will be trained with new materials and methods.</p> <p>Existing procedures will be improved</p>
	<p>E2: Improved agricultural extension capacity</p>	<p>E2-1: Enhanced a national extension net</p> <p>E2-2: Efficient extension materials and methods developed</p>	<p>Advanced planning tools and approaches based on IT will be introduced .</p> <p>Improved planning facility based on IT will be shared between governmental agencies.</p> <p>Advanced statistical tools and approaches of international standard will be accessed and studied.</p> <p>Innovative statistical tools and approaches based on IT will be introduced or developed.</p> <p>Improved statistical facility with efficacy will be operating with collaboration between linked governmental agencies.</p>
	<p>E3: Improved agricultural administration capacity</p>	<p>E3-1: Existing procedures improved</p> <p>E3-2: Enhanced planning capacity through introducing advanced planning tools and approaches</p> <p>E3-3: Enhanced statistical capacity through introducing advanced statistical tools and approaches</p> <p>E3-4: Agro-information system established</p>	<p>Agro-information system suitable for DPRK context will be designed and used.</p>

			<p>Infrastructure for agro-information system will be installed and improved.</p> <p>Various statistical formats enabling fluent information flow will be developed and used.</p> <p>Capacity building on PCM will be promoted both at national committee and the relevant line-ministries.</p> <p>Project cycle management capacity will be evaluated and improved through project activities.</p> <p>Technical capacity to assess food security risk will be improved through studies of procedures and methods.</p>
		E3-5: Enhanced project cycle management capacity	
E4: Improved food security risk management		E4-1: Risk assessment capacity improved	
		E4-2: Risk management capacity improved	<p>Technical capacity to manage food security risk will be improved through updating risk management tools and approaches.</p>

CPF Priorities and their Relevance Matrix

CPF Priority Areas	Relevance to DPRK National MDG	Relevance to UN Strategic Framework	Relevance to FAO Regional Priority Framework	National Key Partners
A: Strengthening national food and nutritional security	<ul style="list-style-type: none"> 1. Improve Living Standard of People 3. Promote Gender Equality and Empower Women 4. Reduce Child Mortality 5. Improve Maternal Health 8. Develop a Global Partnership for Development 	<ul style="list-style-type: none"> 2. Partnerships for Knowledge and Development Management 3. Nutrition 	<ul style="list-style-type: none"> A. Strengthening food and nutritional security B. Fostering agricultural production and rural development D. Improving capacity to respond to food and agricultural threats and emergencies 	MoA, MFA, MoFi, MoFP, NFA, MoLEP, MoPH, NCNI, SCQM
B: Improving natural resource management	<ul style="list-style-type: none"> 1. Improve Living Standard of People 3. Promote Gender Equality and Empower Women 7. Ensure Environmental Sustainability 8. Develop a Global Partnership for Development 	<ul style="list-style-type: none"> 1. Social Development 2. Partnerships for Knowledge and Development Management 3. Nutrition 	<ul style="list-style-type: none"> B. Fostering agricultural production and rural development C. Enhancing equitable, productive and sustainable natural resource management and utilization D. Improving capacity to respond to food and agricultural threats and emergencies E. Coping with the impact of climate change on food and agriculture 	MoA, MoLEP, MoFo, MoFi
C: Improving rural livelihood	<ul style="list-style-type: none"> 1. Improve Living Standard of People 3. Promote Gender Equality and Empower Women 4. Reduce Child Mortality 5. Improve Maternal Health 8. Develop a Global Partnership for Development 	<ul style="list-style-type: none"> 1. Social Development 2. Partnerships for Knowledge and Development Management 3. Nutrition 	<ul style="list-style-type: none"> B. Fostering agricultural production and rural development D. Improving capacity to respond to food and agricultural threats and emergencies 	MoA, MoFi, NFA, MoLEP, MoFo
D: Coping with climate change	<ul style="list-style-type: none"> 1. Improve Living Standard of People 3. Promote Gender Equality and Empower Women 4. Reduce Child Mortality 5. Improve Maternal Health 8. Develop a Global Partnership for Development 	<ul style="list-style-type: none"> 1. Social Development 2. Partnerships for Knowledge and Development Management 3. Nutrition 4. Nutrition 	<ul style="list-style-type: none"> D. Improving capacity to respond to food and agricultural threats and emergencies E. Coping with the impact of climate change on food and agriculture 	SPC, MoLEP, MoA, MoFo, MoFi, NFA
E: Strengthening institutional capacity for agricultural research, extension, and administration	<ul style="list-style-type: none"> 1. Improve Living Standard of People 3. Promote Gender Equality and Empower Women 7. Ensure Environmental Sustainability 8. Develop a Global Partnership for Development 	<ul style="list-style-type: none"> 1. Social Development 2. Partnerships for Knowledge and Development Management 4. Nutrition 	<ul style="list-style-type: none"> C. Enhancing equitable, productive and sustainable natural resource management and utilization D. Improving capacity to respond to food and agricultural threats and emergencies E. Coping with the impact of climate change on food and agriculture 	MoA, MoLEP, MoFo, MoFi, NFA, SPC, CBS, SCST, AAS (BAFS); MoPH

Programmes/Projects and Resources under CPF

Priority Outputs	Programmes/Projects	DPRK National Partners	Total Resources Required (US\$)	Resources Committed (US\$)	Additional Resources (US\$)	
					FAO & Others	Government of DPRK
A1-1	Improved seed production for sustainable agriculture (On-going)	MoA	1 822 455	1 822 455 UNDP/FAO		
	Provision of food security through introduction of effective large-scale F1 rice seed production technologies	AAS	440 000		440 000	
	Improvement of crop productivity by using seed-coating technologies	AAS	441 000		410 000	
	Increase food production through the multiplication of seed potato and improvement of storage facility (On-going)	MoA	212 912	212 912 FAO (OSRO/ITA)		
	Capacity building for rice production in tidal lands through agricultural knowledge, science and technology development (On pipeline)	AAS/MoA	457 700		457 700	
A1-2	Introduction of advanced organic farming technologies based on integrated crop-livestock-aquaculture	MoA	1 700 000			
	Technology development to establish integrated crop-livestock production system for food security and soil fertility (On pipeline)	MoA	442 600		442 600	
	Special Programme for Food Security (On-going)	MoA	3 100 000	800 000 FAO (GTFSS-ITA)		
A1-3	Sustainable development of agricultural production by introduction and use of farm machinery suitable for double-cropping	AAS	495 000		495 000	
	Safe introduction of SRI for cereal productivity improvement (On pipeline)	MoA	441 600		411 600	
	Improvement in agricultural production and agro-ecological protection with windbreak forest	MoLEP/MoA	1 500 000		800 000	700 000
A1-4	Community-based watershed management for food security and improved livelihood in DPRK	MoA/MoLEP/AAS	1 200 000		1 200 000	
	Technical support for agro-forestry development in lowland landscapes (On pipeline)	MoLEP	400 000		400 000	
A2-1	Reduction of post-harvest loss for food security (On-going)	MoA	1 798 686	1 798 686 UNDP/FAO		
A2-2	Technology improvement in on-farm storage of agricultural products	MoA	796 000		396 000	400 000
A2-3	Introduction of technologies to reduce loss during large-scale storage	MoA	345 000		345 000	
A3-1	Introduction of technologies for quality seed production in green house	MoA/AAS	930 000		480 000	450 000
A3-2	Intensification of fruit nursery capacity	NFA	300 000			
A3-3	Technical capacity improvement in livestock breeding stations	MoA/AAS	705 000		435 000	270 000

A3-4	Adaptation of IFF to mandarin fish culture	MoFi	600 000		400 000	200 000
	Strengthening cage fish farming in reservoir (on pipeline)	MoFi	402 503		302 503	100 000
	Strengthening management capacity of freshwater-inhabitable resources	MoFi	550 000		300 000	250 000
	Sustainable aquaculture combined with arboriculture	MoLEP/MoFi	600 000		300 000	300 000
	Introduction of double cropping management and technology of laminaria and gracilaria on the same lifting raft	MoFi	700 000		300 000	400 000
	Enhancement of kelp seedling production by upgrading of hatchery	MoFi	500 000		300 000	200 000
A4-1	Adaptation of Integrated Fish Farming to mandarin fish culture	MoFi	700 000		500 000	200 000
	Support of small scale fishermen by providing net and fishing gears	MoFi	550 000		500 000	50 000
	Improvement of fish forecast	MoFi	600 000		500 000	100 000
	Assistance to fishing cooperatives establishing fish processing system to get more income in the market	MoFi	575 000		300 000	275 000
A4-2	Income increase by technological improvement in on-farm food processing	MoA	810 000		430 000	380 000
	Intensification of production capacity at county-level food processing plants	MoFP	1 660 000			
A5-1	Capacity building for wild fruits and vegetables with high nutrient-value	MoFP	1 260 000			
	Enhanced food and nutrition security through conservation agriculture and double cropping	MoFP, MoA, MoPH	1 937 985			
A6-1	Strengthened food quality control I	MoFA, MoFP	400 000		400 000	
	Capacity building for strengthening inspection, testing and certification	SCQM, MoA	350 000		350 000	
	Capacity building for implementing food safety/quality control procedures	SCQM, MoA	450 000		450 000	
B1-1	Capacity building on land resources management	MoLEP	400 000		400 000	
B1-2	Capacity building on designing land use plan and its implementation	MoLEP	400 000		400 000	
B1-3	Sustainable rural development through integrated use of mountains	MoLEP	1 500 000		1 500 000	
B1-4	Sustainable land management through development and introduction of agro-forestry technologies	MoLEP	600 000			
B2-1	Improvement in livelihood through development and introduction of agro-livestock-forestry technologies	MoLEP	1 400 000		800 000	
	Capacity Building on sustainable forestry management	MoLEP	800 000		800 000	
B2-2	Promotion of self-renewal in forestry	MoLEP	600 000		600 000	
B2-3	Intensification of eco-environmental protection for sustainable agriculture	MoLEP	1 691 000			
	Sustainable forestry management through improved timber utility and decrease in timber consumption	MoFo	5 000 000		3 000 000	2 000 000
B2-4	Improved reforestation with innovative technologies in timber-produced areas	MoFo	815 000		460 000	355 000
	Capacity building for forest seed production and management	MoLEP	800 000		800 000	
B3-1	Prevention of water pollution and protection of aquaculture environment	MoLEP/MoFi	940 000		600 000	340 000
B3-2	Integrated water resource management	MoLEP	1 500 000		1 500 000	
B3-3	Improvement of agricultural productivity by introducing efficient small-scale	MoA	810 000		420 000	390 000

	irrigation technologies					
B4-1/B4-3	Improvement in nature reserve management and bio-diversity conservation	MoLEP	800 000			800 000
B4-3	Capacity building on wetland protection and rational use	MoLEP	600 000			600 000
C1-1	Improved production and processing of sweet sorghum for food, sugar, bio-fuel and fodder in reclaimed tidal land and arid regions (On-going)	MoA	356 000	356 000 (FAO/TCP)		
C1-2	Introduction of integrated fish farming technology to mountainous area	MoFi	400 000			400 000
C1-3	Technical capacity building for higher productivity in cotton	MoA	867 000			487 000
	Rural income increase through development and sustainable use of non-timber forest resources	MoLEP	800 000			800 000
C1-4	Income increase of timber producers by increasing timber byproducts	MoFo	935 000			425 000
C2-1	Community fuel forestation and management	MoLEP	800 000			800 000
D1-1/D1-2	Mitigation of negative impacts of climate change through improved natural disaster management system	SPC	660 000			320 000
D1-3	Improvement of capacity to strengthening climate-related procedures	MoLEP	650 000			
D1-4	Capacity building for REDD	MoLEP	800 000			800 000
D1-5	Capacity building for integrated coast management	MoLEP	800 000			800 000
D1-6	Capacity building for integrated watershed management	MoLEP	1 700 000			1 700 000
E1-1	Capacity improvement in ultra micro active additive production for food and nutrition safety	SCST	525 000			220 000
	Introduction of feed production technologies using pista	SCST	900 000			
	Introduction of microbiological fertilizer production technologies	AAS	370 000			370 000
	Capacity intensification to produce and apply microbiological pesticide to increase vegetable production	AAS	330 000			330 000
	Capacity building on integrated crop nutrition management based on soil and crop analysis	AAS	485 000			485 000
	Improvement in environmental protection and food security by neutralizing sewage disposal and producing organic composite fertilizer	AAS	480 000			480 000
	Protection of farm crops with non-chemical methods by improving bio-diversity	AAS	455 000			455 000
	Establishment of crop growth forecasting system and suitable crop management system based on image interpretation	AAS	425 000			425 000
	Sustainable increase in agricultural production through crop diversification	AAS	800 000			
E1-2	Capacity intensification in cultivation and processing of chlorella for improved nutrition safety	SCST	390 000			180 000
	Capacity improvement to use pro-biotic bacteria in livestock production for nutrition safety	SCST	240 000			240 000
	Introduction of nutrient producing technologies processing spirulina	SCST	930 000			330 000
	Technical capacity building for canola production and processing	AAS	427 000			427 000

	Capacity intensification for breeding, cultivation and processing of oil-bearing crops	AAS	427 000		427 000	
E1-3	Capacity improvement for on-farm production and processing of mushroom	National Academy	300 000			
	Improvement in rural infra-structure by introducing earth-hardening technologies	Pyongyang Agricultural Campus	851 000		434 000	417 000
	Capacity improvement for adopted cultivation of wild fruit trees	MoLEP	1 003 000		468 000	535 000
	Capacity improvement for forestry IPM	MoLEP	800 000		800 000	
	Diversified poultry production by conserving geneplasm of poultry	AAS	407 000		407 000	
	Capacity improvement to assess qualitative value of crop for food and nutrition security	AAS	367 000		367 000	
	Capacity building on application of GIS technology in resource management	MoLEP/AAS	600 000		600 000	
E2-1	Improvement in food and nutrition security with intensified agricultural extension network	SCST	810 000		380 000	430 000
E2-2	Establishment of agricultural extension service support center to improve efficacy in extension	Pyongyang Agricultural Campus	1 150 000		490 000	660 000
	Establishment and operation of model farm with integrated agricultural production system	AAS	2 000 000		2 000 000	
	Improvement in extension through intensification of agricultural science and technology database	AAS	468 000		468 000	
E3-1	Improved agricultural science and extension technology	SCST	250 000		110 000	140 000
E3-2	Capacity building on IT based agricultural planning	SPC and line ministries	980 000		470 000	510 000
E3-3	Enhanced agricultural and rural development through improving agricultural statistical capacity	CBS and line ministries	950 000		450 000	500 000
E3-4	Strengthening of food and agriculture information system (On-going)	MoA and CBS	1 525.585	1 525.585 UNDP/FAO		
E3-5	Capacity building on project cycle management in NCFao and line ministries	NCFao and line ministries	40 000		40 000	
E4-1/E4-2	Improvement in food and agricultural risk management	CBS and line ministries	610 000		310 000	300 000
Grand Total			77 831 066	6 515 638	43 089 900	12 927 000

CPF Results Matrix

Outcomes/Outputs	Indicators/Baselines/Targets	Means of Verification	Risks and Assumptions	DPRK National Partners
Outcome A1: Increased food production				
Output A1-1: Enhanced capacity of seed farms to introduce superior varieties	Indicator: Percentage of certified seed supplied Baseline: 13 Target: >25	MoA annual report	Risk: Lack of genetic resource Assumption: Collaboration between researchers, quality controllers and producers ensured	MoA and AAS
Output A1-2: Integrated cyclic crop and livestock production system enhanced	Indicator: No. of work teams applying integrated crop-livestock technologies Baseline: 50 Target: 200	MoA annual report	Risk: Lack of technologies and skills for animal husbandry Assumption: Consumption of some proportion of crop production ensured	MoA, AAS and SCST
Output A1-3: Modern cultivation technologies introduced	Indicator: Percentage of co-farms applying modern cultivation technologies Baseline: 10 Target: >25	MoA annual report	Risk: Inadequate knowledge transfer and skill training Assumption: Farm level decision-making and choice for suitable cultivation technologies ensured	MoA
Output A1-4: Models for small-scale irrigation systems developed and on farm storage and machinery maintenance improved	Indicator: Percentage of co-farms with windbreak forestry Baseline: 35 Target: >65	MoA annual report	Risk: Lack of genetic resources and tree seedlings Assumption: Participatory forestation and forestry management .	MoA and MoLEP
Output A1-5: Improved double cropping systems with emphasis on potatoes and best practices for agro-forestry developed	Indicator: Percentage of reclaimed tideland in total paddy area Baseline: 2.3 Target: 2.8	CBS annual report	Risk: Lack of investment and technologies to convert reclaimed tidal land into paddy Assumption: Investment into tideland reclamation guaranteed	MoA and SPC
Outcome A2: Reduced food loss in production and supply chains				
Output A2-1: Best practices for reduced on-farm post-harvest loss developed	Indicator: Percentage of post-harvest loss Baseline: 15 Target: 7	MoA annual report	Risk: Inadequate mechanization Assumption: Advanced and integrated technologies introduced	MoA
Output A2-2: New technologies for reducing food loss during storage introduced	Indicator: Percentage of storage loss Baseline: 5 Target: 2	MoFA annual report	Risk: Inadequate facility Assumption: Advanced and integrated technologies introduced	MoA and MoFA
Output A2-3: Technologies for reducing food loss at supply chains introduced	Indicator: Percentage of loss at supply chains Baseline: 6 Target: 3	MoFA annual report	Risk: Inadequate facility Assumption: Advanced and integrated technologies introduced	MoA and MoFA
Outcome A3: Increased production of unprocessed foodstuff with higher nutritional value				
Output A3-1: Enhanced capacity of vegetable seed institutes to introduce	Indicator: Vegetable production per ha Baseline: 65 Target: 100	MoFA annual report	Risk: Lack of genetic resources and certified seed Assumption: Investment for facility cultivation	MoA

and develop superior varieties				ensured		
Output A3-2: New technologies for increasing fruit production introduced	Indicator: Percentage of orchard applying innovative technologies Baseline: 10 Target: 20	NFA and MoA annual reports	Risk: Lack of public awareness among orchard farmers and inadequate on-job training Assumption: Investment for innovating orchard sector ensured			NFA and MoA
Output A3-3: Intensive livestock production systems introduced and developed	Indicator: Modernization of livestock breeding technologies used Baseline: Outdated technologies used Target: Modern technologies used	MoA annual report	Risk: Lack of genetic resources Assumption: Advanced technologies suitable to different local contexts selected, evaluated and applied			MoA
Output A3-4: New technologies for increasing marine and freshwater aquaculture introduced	Indicator: Percentage of aquaculture farms applying integrated technologies Baseline: 5 Target: 15	MoFi annual reports	Risk: Inadequate feed supply Assumption: Technology and knowledge transfer ensured			MoFi, MoA, MoLEP and research institutions
Outcome A4: Improved food processing with higher nutritional value						
Output A4-1: New technologies for on-farm food processing technologies introduced	Indicator: Percentage of on-farm processed products Baseline: 5 Target: >15	MoA annual report	Risk: Lack of machinery and energy Assumption: Package of advanced technologies delivered			MoA
Output A4-2: Strengthened small-scale food processing capacity with new technologies	Indicator: Percentage of locally-processed products Baseline: 8 Target: >20	MoFP annual report	Risk: Lack of machinery and energy Assumption: Package of advanced technologies delivered			MoFP
Outcome A5: Improved knowledge, attitudes, practices and behaviors related to nutrition leading to improved nutritional intakes and better dietary utilization						
Output A5-1 Improved dietary quality/diversity using locally available and affordable foods	Indicator: Diet diversity score with five and more varieties of foods per meal Baseline: 3-4 Target: more than five varieties per meal	MoH and MoA annual report	Risk: No major risks associated Assumption: no major natural disasters occur			MoA, MoPH
Outcome A-6: Improved food safety at all stages of the food chain						
A-6-1 Strengthened food quality control	Indicators: Percentage of locally produced/processed food Baseline: 3-4 Target: > 20		Risk: Lack of experience and public awareness Assumption: Investment for innovating orchard sector ensured			SCQM, MoA, NFA
A-6-2 Strengthened inspection, testing and certification capacities	Indicators: Percentage of locally produced/processed food Baseline: 3-4 Target: > 20		Risk: Lack of data and information Assumption: Cooperation with educational and research institutions ensured			SCQM, MoA, NFA
A-6-3 Strengthened capacity of stakeholders for implementing food safety/quality control procedures	Indicators: Number of research results and materials Baseline: 0 Targets: 25		Risk: Lack of data and information Assumption: Cooperation with educational and research institutions ensured			SCQM, MoA, NFA
Outcome B1: Improved land use						
Output B1-1: Enhanced capacity of land resources management	Indicator: No. of sites reflected in land resources management maps using GIS technology Baseline: 15 Target: 100	MoLEP, MoA and CBS annual reports	Risk: Inadequate technical capacity for mapping Assumption: GIS information and technologies available			MoLEP and MoA
Output B1-2: Enhanced capacity for	Indicator: No. of sites in improved land use plan	MoLEP annual	Risk: Inadequate technical capacity for field			MoLEP

land use planning	maps Baseline: 15 Target: 100 Indicator: No. of demonstration sites Baseline: 0 Target: 2	reports	application of maps Assumption: appropriate technology Risk: Unexpected natural disasters Assumption: Institutional commitment for integrated use of mountains and rivers ensured	MoLEP and MoFO
Output B1-3: Enhanced capacity for integrated use of mountains	Indicator: Area (ha) under sustainable sloping land management Baseline: 1 000 Target: 10 000	MoLEP annual report	Risk: Unexpected natural disasters Assumption: Institutional commitment for integrated use of mountains and rivers ensured	MoLEP
Output B1-4: Enhanced Capacity for integrated sloping land management				
Outcome B2: Improved forestry management				
Output B2-1: Enhanced sustainable forestry management procedures	Indicator: No. of demonstration counties Baseline: 0 Target: 2	MoLEP and MoFO annual reports	Risk: Inadequate capacity of administrative officials, technicians and users Assumption: International cooperation promoted	MoLEP and MoFO
Output B2-2: Effective technologies to improve renewal forests introduced	Indicator: Area (ha) of forestland under improved regeneration Baseline: 0 Target: 1 000	MoLEP annual report	Risk: Pressure of human daily consumption on natural regeneration Assumption: Closed forestry management system applied	MoLEP
Output B2-3: Enhanced capacity for improving timber processing and utility	Indicator: Timber utility rate Baseline: 40 Target: 70	MoFo annual report	Risk: Lack of capacity of increasing timber utility among timber processors Assumption: Institutional commitment to decrease tree felling volume ensured	MoFo and research institutions
Output B2-4: Improved cyclic timber production system	Indicator: Percentage of timber production stations applying new approaches Baseline: 10 Target: 30	MoFo annual report	Risk: Lack of skill training and financial capacity at timber production stations for applying new approaches Assumption: Institutional commitment to apply new approaches ensured	MoFo and research institutions
Outcome B3: Improved water use				
Output B3-1: Enhanced capacity for improving water pollution	Indicator: Percentage of water treatment facilities operating normally with improved technologies Baseline: 20 Target: 60	MoLEP annual report	Risk: Lack of power supply Assumption: Regular monitoring and supervision ensured	MoLEP
Output B3-2: Advanced technologies for improving water resource management introduced	Indicator: No. of demonstration sites Baseline: 0 Target: 2	MoLEP, MoA and CBS annual reports	Risk: Lack of technical capacity of stakeholders Assumption: introduction of advanced technologies ensured	MoLEP and MoA
Output B3-3: New technologies for improving water utility rate introduced	Indicator: No. of demonstration sites Baseline: 0 Target: 2	MoLEP, MoA and CBS annual reports	Risk: lack of technical capacity on water use Assumption: International support ensured	MoLEP and MoA
Outcome B4: Improved nature reserve management and bio-diversity conservation				
Output B4-1: Improved nature reserve management	Indicator: nature reserve management plan development	MoLEP annual report	Risk: technical complexity of assessment of nature reserves	MoLEP

		Baseline: not existing Target: developed and implemented		Assumption: adequate resource ensured	
Output B4-2: Strengthened institutional capacity for the protection and rational use of wetland		Indicator: No. of sites under wetland conservation management plan Baseline: 1 Target: 3	MoLEP annual report	Risk: Time consuming Assumption: Institutional commitment	MoLEP
Output B4-3: Improved bio-diversity conservation capacity		Indicator: Improved bio-diversity conservation capacity Baseline: not existing Target: capacity improved	MoLEP annual report	Risk: Lack of access to reserves in remote areas Assumption: International support ensured	MoLEP
Outcome C1: Diversified and increased rural income resources					
Output C1-1: Improved agro-business for promotion of crop by-products and rural household products		Indicator: Percentage of co-farms with diversified farm products Baseline: 0 Target: 10	MoA annual report	Risk: Lack of new farm products of income value Assumption: Employment of housewives to new jobs for byproducts ensured	MoA
Output C1-2: Enhanced capacity building for increasing industrial crop production		Indicator: Percentage of increase in productivity Baseline: Target: 20	MoA annual report	Risk: Lack of available advanced technologies and input resources Assumption: Cultivation area increased and species and varieties diversified	MoA
Output C1-3: New technologies for increasing non-timber forest products introduced		Indicator: Percentage of productivity increase Baseline: Target: >40%	MoLEP annual report	Risk: Lack of innovative technologies Assumption: Institutional capacity building for production of non-timber products ensured	MoLEP
Output C1-4: New technologies for increasing timber byproducts introduced		Indicator: No. of timber production work teams benefiting from timber byproducts with updated technologies Baseline: 0 Target: 20	MoFo annual report	Risk: Lack of appropriate technology for producing new byproducts Assumption: Employment of housewives for byproducts ensured	MoFo and local administrative agencies
Outcome C2: Improved life environment for rural population					
Output C2-1: New technologies to produce renewable energy for dwelling houses introduced		Indicator: Percentage of rural households equipped with advanced energy technologies Baseline: <3 Target: >8	MoLEP, MoA and CBS annual reports	Risk: Lack of investment to apply new technologies Assumption: Participatory trainings on new technologies ensured	MoA
Outcome D1: Mitigation practices to cope with the impact of climate change improved					
Output D1-1: Natural disaster early-warning and immediate-responding systems improved		Indicator: No. of early-warning stations equipped with modern apparatus Baseline: 0 Target: 4	SPC, HMB and CBS annual reports	Risk: Inadequate communication facilities and technology. Assumption: Public awareness raised and regular contacts between partners guaranteed	SPC, and local administrative agencies
Output D1-2: Technical capacity for assessment of the impacts of climate change on agriculture improved		Indicator: Immediate response to disaster plan developed and implemented Baseline: Work plan not existing Target: Work plan developed and implemented	SPC and CBS annual reports	Risk: limited technical capacity to assess natural disaster impacts Assumption: Public awareness raised and coordination of partner cooperation ensured	SPC, line ministries and local administrative agencies
Output D1-3: Improved mitigation		Indicator: No. of national communications to	MoLEP annual report	Risk: Lack of technical capacity for assessment	MoLEP

practices	FCCC Baseline: 1st communication communications	Target: 2nd and 3rd	report	Assumption: International cooperation promoted	
Output D1-4: National REDD plan developed	Indicator: Development of national REDD plan Baseline: not existing Target: plan developed and launched		MoLEP annual report	Risk: Lack of technical capacity to develop plan Assumption: Cooperation between various stakeholders ensured	MoLEP
Output D1-5: Integrated coast management improved.	Indicator: No. of demonstration sites Baseline: 1 Target: 3		MoLEP annual report	Risk: lack of technical capacity for coastal management Assumption: Sustainable development of coast management ensured	MoLEP
Output D1-6: Integrated watershed management improved.	Indicator: Development of technical guidelines for integrated watershed management Baseline: not existing Target: guidelines developed and enforced		MoLEP annual report	Risk: Lack of capacity of different stakeholders Assumption: Institutional commitment for integrated watershed management ensured	MoLEP
Outcome E1: Improved agricultural research capacity					
Output E1-1: Enhanced national agricultural extension net	Indicator: No. of research results applied Baseline: 0 Target: 10		SCST annual report	Risk: Lack of technical information Assumption: Collaboration and cooperation between researchers and producers ensured	SCST and research institutions
Output E1-2: Enhanced nutrition-security-related research capacity	Indicator: No. of research results applied Baseline: 0 Target: 4		SCST annual report	Risk: Lack of technical information Assumption: Collaboration between researchers and producers ensured	SCST and research institutions
Output E1-3: Enhanced resource-management-related research capacity	Indicator: No. of research results applied Baseline: 0 Target: 7		SCST and MoLEP annual report	Risk: Lack of technical information Assumption: Collaboration between researchers and producers ensured	SCST and research institutions
Outcome E2: Improved agricultural extension capacity					
Output E2-1: Enhanced national extension net	Indicator: No. of rural extension stations operating Baseline: 0 Target: >10		SCST annual report	Risk: Lack of efficient extension materials/methods guaranteed Assumption: Normal operation of national IT network	SCST and Extension Service Center
Output E2-2: Efficient extension materials and methods developed	Indicator: Activities of extension service center Baseline: Center not established Target: Center established and working		SCST annual report	Risk: Lack of data and information Assumption: Cooperation with educational and research institutions ensured	Educational/research institutions and SCST
Outcome E3: Improved agricultural administration capacity					
Output E3-1: Existing procedures improved	Indicator: No. of procedures improved Baseline: 0 Target: >25		Annual reports by each agency	Risk: Lack of agricultural technology extension capacity Assumption: Institutional commitment ensured	Concerned governmental agencies
Output E3-2: Enhanced planning capacity through introducing advanced planning tools and approaches	Indicator: Percentage of agricultural planning works using modern tools Baseline: 0 Target: >30		SPC annual report	Risk: Lack of knowledge and skills Assumption: Collaboration between national and international partners ensured	SPC and line ministries

Output E3-3: Enhanced statistical capacity through introducing advanced statistical tools and approaches	<p>Indicator: Percentage: At least 70% of statistical agro-information will flow through the information system between linked governmental agencies and at least 80% of statistical formats developed or improved for easier capture and electronic flow. Baseline: 0 Target: >70</p> <p>Indicator: No. of co-farms linked by IT network Baseline: 0 Target: >18</p>	CBS annual report	<p>Risk: Lack of capacity of agencies in the establishment and operation of the Food and Agricultural Information System and lack of technical support Assumption: Regular exchange of statistical between agencies ensured</p> <p>Risk: Lack of capacity of introducing IT in agriculture information system Assumption: Efficient operation of national IT network ensured</p> <p>Risk: Lack of capacity of PCM Assumption: Institutional measures taken</p>	CBS and line ministries
Output E3-4: Agro-information system established	<p>Indicator: Percentage of governmental officials with PCM skills Baseline: 10 Target: >30</p>	MoA annual reports		MoA and concerned agencies
Output E3-5: Enhanced project cycle management capacity		Training reports		NCFAO and line ministries
Outcome E4: Improved food security risk management				
Output E4-1: Risk assessment technical capacity improved	<p>Indicator: Risk assessment procedures developed Baseline: Procedures not developed Target: Procedures developed</p>	CBS annual report	<p>Risk: Lack of necessary data and tools Assumption: Collaboration between concerned institutions facilitated</p>	CBS and line ministries
Output E4-2: Risk management improved	<p>Indicator: Risk management procedures Baseline: procedures not existing Target: procedures developed and implemented</p>	CBS annual report	<p>Risk: Lack of capacity of risk management activities ensured Assumption: Coordination of risk management activities ensured</p>	CBS and line ministries

CPF Monitoring Matrix

CPF Priority Outcomes	CPF Targets	UNSF Targets
A1: Increased food production	More than 25% of seed supplied will be certified seed. Integrated crop-livestock technologies will be applied in 200 work teams. More than 25% of co-farms will apply modern cultivation technologies. More than 65% of co-farms will have windbreak forestry. Ratio of reclaimed tideland in total paddy area will be increased to 2.8%.	Average yields for main crops will be increased by >50%. Percentage of households fall into high- or medium-risk category for future livelihood will be decreased to 40%. Percentage of households with acceptable food consumption score will be 60%. 12 000ha of land will be reclaimed and protected from flood. Percentage of households with poor food consumption will be decreased to 15%. Percentage of households consuming three or more food groups will be increased to 70%.
A2: Reduced food loss in production and supply chains	Post-harvest loss will be reduced to 7% of total production. Storage loss will be reduced to 2% of total storage. Loss at supply chains will be reduced to 3% of total supply.	Area of productive fruit orchards planted with new improved virus-free cultivars will be increased to 10 000ha. Percentage increase in grazing livestock numbers on co-farms will be 20% Percentage of active fishing cooperatives will be 80%
A3: Increased production of unprocessed foodstuff with higher nutritional value	Vegetable production per ha will be 100t. 20% of orchards will apply innovative technologies. Modern technologies will be used in livestock breeding. 15% of aquaculture farms will apply integrated fish farming technologies.	Percentage of fortified food produced against the operational requirements in targeted areas will be 100%. 11 local food production facilities reaching operational capacity. 50 factory personnel will be trained. Improved diet diversity and quality
A4: Improved food processing with higher nutritional value	15% of food will be processed on farm. 20% of food will be processed locally.	Improved food safety programmes
A5: Improved knowledge, attitudes, practices and behaviors related to nutrition leading to improved nutritional intakes and better dietary utilization	2% improvement in nutritional status of children under age of five 2 countries targeted and received assistance in nutrition 2 nutrition awareness campaign organized	Capacity will be enhanced for master planning of integrated land development 6 integrated land management demonstration sites will be produced.
A6: Improved food safety at all stages of the food chain	20% improvement in food safety at all stages of the food chain through improved procedures and control	500 000 trees will be planted and maintained. Number of user groups will be increased, land area doubled, and deforestation decreased with respect to sloping land area.
B1: Improved land use	100 sites will be reflected in land resources assessment maps using GIS technologies and will be developed with improved land use plan maps. 2 demonstration sites will be operating with integrated mountain use plan 10 000ha of land will be managed with sustainable sloping land management system.	
B2: Improved forestry management	2 demonstration counties will operate sustainable forestry management system. 1 000ha of forestland will be under improved regeneration. Timber utility rate will be increased to 70%.	

B3: Improved water use	<p>30% of timber production stations will apply new approaches. 60% of water treatment facilities will operate normally with improved technologies. 2 demonstration sites will be established for rational use of water resources. Water utility rate will be improved in 2 demonstration sites. Nature reserve management will be improved . 3 sites will be managed with wetland conservation plans. Bio-diversity conservation plan for backbone Mt. Paekdu will be implemented.</p>	Guideline on integrated water resource management will be produced.
B4: Improved nature reserve management and bio-diversity conservation	<p>10% of co-farms will produce diversified farm products. Productivity of industrial crops will be increased by 20%. Productivity of non-timber forestry products will be increased by more than 40%. 20 timber production work teams will be benefiting from timber byproducts with updated technologies.</p>	Watershed management plan will be developed and piloted in 2 GFS receiving communities. Capacity building will be promoted for management of Mt. Paekdu biosphere resource
C1: Diversified and increasing rural income resources	<p>More than 8% of rural households will be equipped with advanced energy technologies.</p>	National policies and strategies to promote sustainable development and use of conventional and alternative energy sources will be produced. Rural energy supply will be improved through assessment, development and utilization of alternative green energy sources. Percentage of families required to fetch water to meet domestic needs will be decreased to 15%. 35 urban and 100 rural areas will have functioning gravity-fed system.
C2: Improved life environment for rural population	<p>4 early-warning stations will be equipped with modern apparatus</p>	Natural emergencies will be responded to in a timely manner, on the basis of effective coordination between the government and international community. Contingency plans will be reviewed and updated annually, and activated in the event of natural emergencies. Early-warning and disaster management system will be functional and measured by international standards. 120 communities will have improved infrastructure to mitigate the impact of shocks.
D1: Mitigation practices to cope with the impact of climate change improved	<p>2nd and 3rd national communications to FCCC will be launched.</p>	
E1: Improved agricultural research capacity	<p>National REDD plan will be developed. 3 demonstration sites will be established for integrated coastal management. Guidelines for integrated watershed management will be developed and enforced. Results of 10 food-security-related, 4 nutrition-security-related and 7 resource-management-related research topics will be applied.</p>	Knowledge network will be established (especially in agricultural research).

E2: Improved agricultural extension capacity	More than 10 rural extension stations and an extension service center will be working.	Plan of action will be produced. Knowledge management and dissemination systems will be functioning.
E3: Improved agricultural administration capacity	<p>More than 25 procedures will be improved.</p> <p>More than 30% of agricultural planning work will be managed with modern tools.</p> <p>More than 50% of agricultural statistical developments will be managed with modern approaches.</p> <p>More than 18 co-farms will be linked by IT network.</p> <p>More than 30% of government counter-part project staff will be familiar with PCM skills.</p>	National environmental legislations will be reviewed, updated and approved.
E4: Improved food security risk management	Risk assessment procedures and risk management will be improved	CFSAM and/or RFSA will take place as needed. Appropriate staff will be trained as needed.

CPF Short-Term Implementation Plan

Activities	2012~2013												DPRK Partners	
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		Jul
1. Presentation of programmes and projects for FY2012 to CPFIC.	X													Govt agencies
2. Prioritization of programmes and projects for FY2012 by CPFIC		X												CPFIC
3. Clearance of FY2012 programmes and projects by NCFAO			X											NCFAO
4. Submission of programmes and projects for 2012 to FAO, Govt of DPRK, UN agencies and development partners for financing			X											NCFAO
5. FAO consideration of funding FY2012 programmes and projects			X											FAO
6. Preparation of workplan for FY2012 by CPFIC				X										CPFIC
7. Clearance of workplan for FY2012 by NCFAO				X										NCFAO
8. Launch and implementation of FY2012 programmes and projects					X	X	X	X	X	X	X	X	X	Govt agencies
9. Review by CPFIC of half-year CPF progress											X			CPFIC
10. Presentation of programmes and projects for FY2013 to CPFIC.											X			Govt agencies
11. Prioritization of programmes and projects for FY2013 by CPFIC											X			CPFIC
12. Clearance of programmes and projects for FY2013 by NCFAO											X			NCFAO
13. FAO consideration of funding FY2013 programmes and projects												X		FAO
14. Request for DPRK annual projects budget for FY2013													X	Govt agencies
15. Preparation of workplan for FY2013 by CPFIC												X	X	CPFIC