Crop Situation Update

(A joint assessment of 2010 summer crops and outlook for 2011 winter crops)

February 2011





WORLD FOOD PROGRAMME



FOOD AND AGRICULTURE ORGANIZATION

Acknowledgement

This assessment was undertaken jointly by the Ministry of Agriculture and Cooperatives, the World Food Programme and the UN Food and Agriculture Organization.

The assessment team consisted of the following experts:

Mr. Bishnu Prasad Aryal, Mr. Hemraj Regmi, Mr. Shiv Nandan Sah, Mr. Kamal Acharya, Mr. Uttam Hari Rimal (from MoAC)

Dr. Krishna Pahari, Mr. Pushpa Shrestha, Ms. Mariko Kawabata, Mr. Binod Dev Bhatta, Mr. Rabindra Chand, Ms. Sunita Raut, Mr. Laxmi Narayan Chaudhari, Mr. Dik Narayan Chaudhari, Mr. Prakash Subedi, Mr. Krishna Majhi, Mr. Bhanu Limbu, Mr. Kishor Bhandari, Mr. Madan Lal Karki, Mr. Gyanendra Bahadur Singh, Mr. Birendra Kadayat (from WFP)

Mr. Xavier Bouan, Mr. Bed Rokaya, Mr. Shiva Kumar Shrestha (from FAO)

The field work was undertaken by the joint assessment team from these three organizations as well as 32 WFP field monitors.





This product is funded by the European Union Food Facility. The views expressed in this publication do not necessarily reflect the views of the European Commission

HIGHLIGHTS

- The 2010/11 production for major summer crops (paddy, maize and millet) is estimated at 4.46 million MT, 2.07 million MT and 0.30 million MT respectively, representing an increase of 10.9 percent, 11.5 percent and 1.0 percent over the previous year, respectively.
- The winter crop is currently in growing stage and its outlook so far remains good, with production likely to be higher than last year, due to extended monsoon rains in 2010, which kept the soil moisture favourable for the germination, and to good precipitation during January-February 2011 favourable to growth, especially for wheat.
- Good summer crop production combined with the prospects of a good winter crop could result in a very marginal surplus in Nepal's edible cereal balance for 2010/11 against a record deficit of 330,000 MT (6.2 percent) last year.
- In spite of the overall good production at the national level, given the large geographic disparities in
 production and yields, some areas in Nepal, particularly in the Eastern Terai districts of Saptari and
 Siraha, and in the Mid- and Far-Western hills and mountains are likely to face food deficits leading to
 food insecurity, especially for the most vulnerable populations.

1. BACKGROUND AND OBJECTIVES

Food security is an issue of national concern in Nepal. Since it is predominantly an agricultural country, crop production is an important contributor to national food security. Paddy is the most important crop in Nepal contributing more than 50% in the national cereal grain balance calculation by MoAC (including paddy, maize, wheat, barley and millet). This crop is planted in June—July and harvested in October-November. Similarly, maize is the second most important crop in Nepal, which is mainly planted in the hill districts. The crop was harvested between July to September. Millet, another summer crop mainly planted in hill and mountain districts is harvested around November.

This crop situation update is the result of a joint assessment by the Ministry of Agriculture and Cooperatives (MoAC), World Food Programme (WFP) and Food and Agriculture Organization (FAO) on the production status of these summer crops and to assess the outlook of the winter crops, mainly wheat across the country.

Following were the main objectives of this joint mission:

- 1. To assess and verify the overall summer crop production situation in the country
- 2. To assess the preliminary outlook of the winter crops, mainly wheat across the country
- 3. To make recommendations for policy level considerations

2. METHODOLOGY

The mission is based on national and district level analysis of the crop and food supply situation by using available data, as well as field verification in selected districts of the country in different development and ecological regions.

Update on district crop situation was compiled by MoAC using the reports sent by the District Agriculture Development Offices across the country and preliminary estimates of production were thus made in November 2010. Joint field consultation and verification mission consisting of staff from MoAC, WFP and FAO was then organized to 19 districts in four development regions in all ecological belts. One of the teams covered Jhapa, Bhojpur, Panchthar, Terhathum and Taplejung in the Eastern Development region. The second team covered Udayapur, Saptari and Siraha in the Eastern Development region, and Dhanusha and Sarlahii in the Central Development region. Similarly, two other teams covered Banke, Surkhet, Jajarkot and Mugu in the Mid-Western development region; and Kailali, Dadeldhura, Doti, Achham and Baitadi in the Far-Western development region, respectively. Using a pre-designed district check list as a guide, the joint mission held district level consultations with various district level stakeholders including district agriculture development officials, local development officers, chief district officers, district livestock officials and other organizations related to agriculture and food security in the district. In addition, the mission also visited at least one community in each district to understand from the local people the situation of crop production

and food security in their own words. The sources of data used in this report include MoAC preliminary estimates of 2010, field verification mission (which used district checklist and community interaction), rainfall data from Department of Hydrology and Meteorology, as well as information from District Food Security Networks.

3. RAINFALL SITUATION FOR SUMMER CROPS

Most of the country had generally favourable rainfall conditions for the summer crops: maize, millet and paddy. However, there were areas with inadequate or untimely rainfall affecting these crops.

Monsoon is a typical South Asian meteorological phenomenon, which originates from the Bay of Bengal in the Indian Ocean, and is the cause of most of the rainfall in this region. In Nepal, more than 80 percent of the annual precipitation takes place due to this event. Normally, monsoon starts around June 10 and lasts until 3rd week of September. According to the reports received from the Department of Hydrology and Meteorology, Monsoon this year started about a week later than normal and remained strong until the end of October. The rainfall was weak in the month of June and even in July in some parts of the country, which affected the plantation of paddy. Thus overall, area planted under paddy was less than the normal paddy area in the country (even though area planted was 1.03% higher than last year, it was 3.8% less than in 2008/09). About 60 thousand hectares of the paddy area was either left fallow or was replaced by other crops. The effect was particularly remarkable in the Eastern Terai districts of Saptari and Siraha. In agriculture the number of days having more than 1 mm of rainfall is considered significant for the paddy crop. And as per the data, the number of such days remained 73 days in 2010 compared to 57 days in 2009.

Maize plantation was delayed in most hill districts in the Mid- and Far- Western development regions by up to a month, and later it was affected by excessive rainfall. Similarly, even though rainfall was generally good for millet, insufficient rainfall during plantation affected millets in Mugu and hailstorm during late October affected this crop in Bajura and Doti just before harvesting.

Figure 1 provides a chart of rainfall pattern observed in the monsoon season of the last four years and Map 1 shows the rainfall situation across the country in the period July to September, as reported by the District Food Security Networks.



Figure 1: Rainfall distribution and intensity in the years 2007-2010 a) average monsoon rain, and b) rainy days with \geq 1 mm of rainfall in the monsoon months (Source: Department of Hydrology and Meteorology)



Map 1: Rainfall 2010 Monsoon Season (source: District Food Security Networks)

4. NATIONAL OVERVIEW OF SUMMER CROP PRODUCTION

The national crop production has shown a significant increase in 2010/11 compared to last year. The production increase in two major cereal crops, namely paddy and maize was reported in double digits: 10.9 percent and 11.5 percent, respectively. Maize production has been at record high level in 2010, with a total harvest of 2.07 million MT. Despite the increase in national crop production some districts such as Saptari, Siraha, Okhaldhunga, Terhathum, Dailekh and Bajura reported a decrease in production.



Main Summer Production

Figure 2: Production trend of main summer crops in Nepal

Even though 2010/11 production figures are significantly higher than last year's, they are still modest in absolute terms, considering the negative performance in 2009/10 when paddy production, for instance, was

11 percent lower than that of 2008/09. Figure 2 (above) shows the production trend of paddy, maize and millet for the past 15 years.

A detailed status of crop area, production, and yield by Ecological belts and Development Regions for the summer crops in 2010/2011 is presented in the Table 1 (below), also showing changes over previous year(s).

Area in Ha, Prod in M Ton and Yield in kg/ha

TABLE 1: SUMMER CROP PRODUCTION FY 2010/2011

Belt/Region	Paddy				Maize		Millet			
	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield	
ECO-BELT										
Mountain	66,713	137,674	2,064	98,527	209,344	2,125	53,879	55,929	1,038	
Hill	407,037	1,126,711	2,768	623,176	1,411,729	2265	206,340	236,443	1,146	
Terai	1,022,726	3,195,893	3,125	184,550	446,449	2419	9,601	10,319	1,075	
DEVELOPMENT REGION										
Eastern	297,652	898,513	3,019	55,000	142,460	2590	5,380	6,026	1,120	
Central	418,503	1,246,467	2,978	213,232	517,517	2427	63,136	68,915	1,092	
Western	335,452	1,073,670	3,201	237,299	571,486	2408	96,288	105,800	1,099	
Mid Western	173,720	549,294	3,162	153,490	323,040	2105	21,737	25,471	1,172	
Far Western	149,501	411,202	2,750	54,550	97,312	1784	16,182	16,634	1,026	
NEPAL	1,496,476	4,460,278	2,981	906,253	2,067,522	2,281	269,820	302,691	1,122	
Source: ABPSD, MOAC 2010										

PERCENTAGE CHANGE COMPARED TO LAST YEAR

Belt/Region	Paddy			Maize			Millet			
	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield	
ECO-BELT										
Mountain	5.8	12.3	5.8	5.6	9.7	3.9	-18.2	-20.0	- 21.8	
Hill	4.8	12.8	7.7	0.4	6.4	6.2	1.6	3.5	1.9	
Terai	1.1	13.0	11.9	8.3	31.8	21.7	-4.2	-7.8	- 3.8	
DEVELOPMENT REGION										
Eastern	-4.8	3.3	8.5	4.8	7.3	2.4	3.0	8.0	4.8	
Central	2.5	6.4	3.8	5.4	17.9	11.9	-1.4	-1.8	-0.3	
Western	3.6	22.2	17.9	6.3	8.4	2.0	-0.7	-4.2	-3.5	
Mid Western	5.2	11.5	5.9	-3.6	15.9	20.1	1.3	6.5	5.1	
Far Western	4.2	21.6	16.8	-0.1	7.6	7.7	3.5	7.3	3.6	
NEPAL	1.03	10.85	9.72	3.49	11.45	7.68	0.50	1.06	0.55	

Source: ABPSD, MOAC 2010

PRODUCTION ESTIMATES OF PADDY, MAIZE AND MILLET IN 2010/11

Crops	Year 2010/11			Ye	ar 2009/10		Year 2008/09			
	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield	
Paddy	1,496,476	4,460,278	2,981	1,481,289	4,023,823	2,716	1,555,940	4,523,693	2,907	
	(1.03)	(10.85)	(9.74)	(-4.80)	(-11.05)	(-6.57)	(0.43)	(5.22)	(4.77)	
Maize	906,253	2,067,522	2,281	875,660	1,855,184	2,119	875,428	1,930,669	2,205	
	(3.49)	(11.45)	(7.66)	(0.03)	(-3.91)	(-3.94)	(0.60)	(2.77)	(2.15)	
Millet	269,820	302,691	1,122	268,473	299,523	1,116	265,889	292,683	1,101	
	(0.50)	(1.06)	(0.57)	(0.97)	(2.34)	(1.35)	(0.15)	(0.54)	(0.40)	
Buck wheat	10,304	8,841	858							

Area in Ha, Prod in MT and Yield in Kg/ha

The figures in the parentheses are the percentage change compared to previous year Source: Agribusiness Promotion and Statistics Division/MOAC 2010





Map 2: 2010/11 Summer crop production by VDC (paddy, maize) (source: District Food Security Networks)

5. WINTER CROP PRODUCTION OUTLOOK

Wheat is the main winter crop in Nepal and is currently in the growing stage. According to the reports available from the District Agriculture Development Offices, FAO district office and WFP field monitors; and findings from the joint field missions, the winter crops (wheat and barely) are growing well. Reports suggest that area planted under wheat has increased compared to last year (area under wheat last year was 731,131 Ha). Some rainfall in mid-January and in February in many areas of the country, and snowfall in mountain areas towards the end of December and also later were helpful in enabling germination and growth of the crop as well as retaining moisture in the soil. Most parts of the country also received significant rainfall and/or snowfall in mid-February, which helps the winter crops. Long sky overcast (cold wave) also occurred in the month of January in the Terai districts. There are some reports of Blight in Potato, Tomato and other winter vegetables due to this cold wave. Overall, as per the field observations and reports from district offices of MoAC, the winter crop production is likely to be higher than last year and could be as high as in the year 2007/08, the year with the highest record of winter crop production (the wheat production in that year was 1.57 million MT) in Nepal.

Crop situation in selected districts covered by the joint mission

Eastern development region: Among the districts in this region; Bhojpur, Terhathum, Jhapa, Taplejung and Panchthar were covered by team one, while Udayapur, Siraha and Saptari were covered by the team two, due to logistic considerations. With the exception of Saptari and Terhathum, the production of main summer crops remained good in these districts. The paddy production in Jhapa - the largest paddy producing district in Nepal in previous years - went up by 9.5% compared to last year, reaching a total of 387,690 MT. Similarly, the production in Bhojpur, Taplejung and Pachthar went up by 1.0%, 19.8% and 16.6% respectively, while that in Saptari and Terhathum went down by 28% and 4.4% compared to the last year. Taplejung, Terhathum, Panchthar and Bhjojpur benefited significantly from the production and selling of Cardamon, with a good production and high market price ranging from NPR 1,000 (Bhojpur) to 1,550 (Terhathum, Taplejung and Pachthar) per kg, which were more than five times higher than last year. In addition, people in these districts also benefit from ginger and those in Jhapa and Ilam benefit from the production and sale of tea. However, income from tea in Jhapa has been affected by reduced production due to late rainfall and civil insecurity (bandh and strikes). Farmers in Jhapa are also increasingly making benefit from betel nuts (Supari). Bhojpur district has benefited from improved accessibility since the district headquarters has been connected by road two years ago and is also benefiting from sale of orange. In Terhathum, production of summer potato reportedly increased by 23% compared to last year. In spite of overall good harvest of paddy, the eastern Terai district of Saptari has been significantly affected by loss of paddy (by 28%), due to inadequate rainfall in time for the crop and particularly the areas without irrigation facilities suffered heavily. As much as 60% of the paddy field remained fallow in highly affected areas (43 VDCs) while even in the areas planted, the crop did not perform well due to inadequate rain in time. Through the interaction with various farmers in the community, the mission observed that lack of irrigation is the main reason for low production in this district and thus provision of irrigation, improved seeds and fertilizer, and some awareness in improved farming methods could be helpful in boosting agriculture. In case of Siraha, overall paddy production in the district has decreased by 10% compared to last year, 29 VDCs in the southern part of the district were badly affected due to drought during planting period; the production decreased by more than 40% in these areas. The mission was pleased to observe improved farming techniques introduced through farmer field schools in some areas, as well as increased production of crops and vegetables resulting from improved access to seeds and fertilisers supported by the EU Food Facility.

Central development region: The districts covered by the mission in this region are Dhanusha and Sarlahi. Team two covered these districts in addition to Udayapaur, Siraha and Saptari of Eastern development region mentioned above. The production of paddy in Dhanusha decreased by almost 20% compared to last year, due to inadequate rainfall in time for paddy plantation. Out of a total of 65,000 ha of paddy field in this district, paddy plantation could not be done in some 9,000 ha due to drought, and the crop did not perform well even in many of the areas that were planted. With barely half of the total paddy field with irrigation facilities, farming in the district is vulnerable to any anomalies in rainfall pattern. There are some programmes implemented in the district for enhancing food security, such as livestock programmes by the District Livestock Office, goats programme by Poverty Alleviation Fund (PAF), etc but the needs of the population appears to be much larger than what is covered so far. Sarlahi district reported a decrease in paddy production by about 5% compared to last year, mainly due to inadequate rainfall in the district. It was noted that MOAC had implemented crop relief programme by providing paddy and vegetable seeds for free in areas affected by the failure of hybrid maize crops in the previous year. During community visits, the assessment team also had opportunity to interact with some members of farmers' groups and felt that such an organization of small farmers into groups or cooperatives could be a way to enhance their production and marketing capabilities as well as to access services from the agriculture offices.

Mid-Western development region: The districts covered by the joint mission in this region include Banke, Surkhet, Jajarkot and Mugu. The paddy production in Surkhet dropped by 7% while that in Banke, Jajarkot and Mugu increased by 15.6%, 24% and 66% respectively compared to last year. In Banke, the area planted as well as the yield per ha was higher than last year, thus contributing to a total paddy production of 119,720 MT in the district, mainly due to favourable rainfall conditions. Interaction with district agriculture officials revealed several programmes being implemented in the district, including integrated water management programme, oil mission, seed production programme, onion mission, integrated pest management, and cooperative farming project. In Surkhet, the area planted as well as production of paddy was slightly less than last year but the production of maize, another important crop after paddy, has reached 41,216 MT, an increase of 17% from last year. Favourable rainfall helped boost production in Jajarkot with increase of 24% in paddy and a hopping 79% in maize compared to last year. In Mugu, while the maize production remained at the same level as last year, the paddy production went up by 66% to reach a total of 5,553 MT. This is some respite to this district – which is one of the most food insecure in Nepal-, though the district is still likely to be food deficit.

Far-Western development region: Kailali, Doti, Achham and Baitadi in this region were covered by one of the joint assessment teams. It was found that estimated paddy production has gone up in all these districts except Baitadi. Kailali reported a 43% increase in paddy production compared to last year, thus reaching a level of 212,100 MT, which is likely to have a positive effect on overall food balance situation of this region. However, the maize production this year fell by about 15% to only 28,500 MT (compared to 33,500 MT last year) due to delayed rainfall for that crop. Doti reported 10% increase in paddy production while maize production was at same level as last year. In Baitadi, while the paddy production decreased by 8%, maize production was up by 20% in the same period. In case of Achham, which was affected by very poor production last year, paddy production increased by a modest 10% compared to last year, while that of maize decreased by 4%.

6. IMPLICATIONS FOR THE NATIONAL FOOD BALANCE SITUATION

Compared to 2009/10, the summer crop production has been estimated to have increased by 10.9% for paddy, 11.5% for maize and 1.0% for millet. The total estimated paddy production (4.46 million MT) is still less than the production of 4.52 million MT in 2008/09, while the estimated maize production appears to be the highest on record (2.07 million MT).

Over the past years, the level of production has not kept up with the increasing demand of the growing population. For example, as per the food balance sheet prepared by MoAC including five major cereal grains of rice, maize, whieat, barley and millet, Nepal has been a food deficit country for four of the last five years between 2005/06 and 2009/10. Last year (FY 2009/10) witnessed the largest food deficit so far in Nepal, with a net deficit of 330,000 MT. Because of this, a significant increase in production over last year may be barely adequate to meet requirements for the present year: assuming the same winter crop production figures as in the year 2007/08, the marginal cereal grain surplus could represent 14,000 MT (or 0.3 percent of requirements) in the fiscal year 2010/11.

Table 2 and Figure 3 below show the trends of national edible cereal grain production balance since the year 2000/01 including projection for the year 2010/11.

Year	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*
Total production	7,171.8	7,246.9	7,360.4	7,747.1	7,767.5	7,656.5	7,329.0	8,069.1	8,114.1	8,430.0
Edible production	4,543.0	4,653.4	4,884.4	4,942.6	4,869.4	4,753.4	5,195.2	5,170.4	4,967.5	5,419.0
Requirement	4,463.0	4,620.0	4,671.3	4,779.7	4,891.0	4,941.1	5,172.8	5,303.3	5,297.4	5,405.0
BALANCE	80.0	33.4	213.0	162.8	(21.6)	(187.7)	22.4	(130.0)	(330.0)	14.0

* estimated production figures

TABLE 2: Details of national edible grain production (2000-2011) and impact on food balance (all values in thousand MT)



Figure 3: National edible cereal production surplus/deficit for the past ten years (source: APSD/MoAC for data until 2009/10 and projections for 2010/11 made under the assumption that winter crop in 2010/11 will be at the same level as 2007/08))

7. FOOD MARKET SITUATION

Food prices have continued to increase in Nepal since the soaring global food prices in 2008. Normally, there is a seasonal decline in price of food commodities, after the harvest. In spite of the relatively good harvest compared to last year, prices remained at the same high level even after the harvest.



Figure 4. Staple Food Prices December 2008/09/10

An analysis of price data (Figure 4) collected by Agribusiness Promotion and Market Development Directorate (ABPMDD) of the Department of Agriculture/MoAC revealed that price of coarse rice in December 2010 has increased by 10% compared to the same time last year and by 25% compared to December 2008. Similarly, price of wheat flour has increased by 4% compared to last year and by 20% compared to 2008. On the other hand, price of lentil broken (musuro) has declined by 5% compared to last year, while that of black gram has gone up by about 10%. Similarly, while the price of mustard oil has remained almost the same, that of sovabean oil has gone up by about 5% during the same period. Price of red potato has slightly decreased than a year ago, but still much higher than what it was two years ago.

Food price inflation continues to be of significant concern in Nepal as the annual food price inflation, as measured by the consumer price index (CPI), stood at 13.3 percent in December 2010 on top of 16.0% inflation during the same period last year.

Recently, a sharp increase in global prices of major cereals has been reported, particularly with wheat grains being traded at around 50% above the previous year's levels (FAO, December 2010). This increase has not had significant impact on Nepali grain prices yet, but needs to be closely monitored for any future impacts.

8. FOOD SECURITY SITUATION AND OUTLOOK

Food security situation across Nepal is generally good at this time due to overall good harvest of summer crops. However, there are pockets of areas with different levels of food insecurity. For example, western Saptari and southern Siraha experienced some 40-60% loss in their paddy harvest due to untimely rainfall, thus making significant population in these districts facing moderate to high levels of food insecurity, particularly poor and households with little or no land. Likewise, some VDCs in south western belt of Baitadi are highly food insecure as the production of maize and paddy remained moderate to poor, and market price increased by 20-25 percent. Similarly, there are significant areas in hills and mountains of the Mid- and Far- Western development regions with moderate level of food insecurity; these areas can quickly turn into high level of food insecurity if there is any natural disaster adversely affecting the winter crops. The details of the food security situation in Nepal are presented in the Issue 30 of the Food Security Bulletin jointly released by MoAC and WFP.

The food security outlook for the next few months seems to be generally good across Nepal due to the stock available from the recent harvest and also relatively good outlook of winter crops so far. However, there are still pockets of populations for which food security outlook is not promising and the situation needs to be closely monitored.

CONCLUSION AND RECOMMENDATIONS

Overall, the 2010 summer crop harvest has been good in Nepal even though there are areas with lower production in various parts of the country. Similarly, the winter crop is also performing generally well and the outlook so far suggests a production higher than last year. The increase in production of summer crop is mainly attributed to favourable precipitation across the country, but also to improved access to fertilizers, seeds, and extension activities.

Even though the production situation for this year is generally good with the prospect of having marginal food surplus in the country, Nepal has been facing pressure to keep up the production to meet the increasing needs of the growing population. For example, as per the food balance sheet of MoAC considering five major cereal grains, Nepal has remained food deficit in six of the past ten years, in spite of being largely an agricultural country with about two thirds of the population employed in farming.

One particular concern is that Nepal's agriculture is mainly dependent on the rainfall because only little more than a third of the farm land is with irrigation facilities. And the impact of the climate change has made the rainfall situation increasingly unreliable, both in terms of magnitude as well as timeliness for agriculture. Nepal has been recognized as one of the top countries vulnerable to climate change and thus maintaining and boosting agricultural production for the growing population thus remains a challenge.

Also due to large geographic variability within the country in terms of precipitation, access to infrastructure and services, even in a normal production year, there are significant populations in various parts of the country facing food deficit and thus at risk of food insecurity.

Based on the findings of the joint mission, following recommendations are made:

SHORT-TERM QUICK IMPACT INTERVENTIONS:

- Continue to strengthen the Nepal Food Security Monitoring System (NeKSAP), in which crop monitoring and assessment is an important component.
- Continue to monitor market prices and market supply situation of local, regional and international markets, particularly in the context of recent news on renewed global food price hike.
- Continue to monitor the food security situation as a basis to support populations in the event that they face high level of food insecurity requiring assistance.

MEDIUM AND LONGER-TERM IMPACT INTERVENTIONS

- Continue with the programs such as the ongoing EU funded program on "support to mitigate the negative effects of high food prices on local rural populations" implemented by WFP and FAO in collaboration with MoAC and MLD, and look for possibilities to expand such projects in other areas incorporating the lessons learnt so far.
- Develop capacity of farmers, extension workers. etc to improve agricultural practices for cereal crop production, vegetables, livestock, and include potato in the overall food balance to allow more accurate reporting in the food balance.
- Increase access to quality seeds and other agricultural inputs, and improve the knowledge and proper usage of agricultural inputs and machinery so as to increase the crop yields and to enhance resilience against drought and irregular rainfall.
- Take measures to enhance the production and marketing of appropriate cash crops suitable to different areas as a way to enhance income of the populations.
- Increase investment in the agricultural sector to enhance productivity, including irrigation facilities, provision of improved seeds, fertilizers, etc.
- Continue to work on national agricultural development strategy, and food and nutrition security plan currently considered by the Government of Nepal
- Support the development and utilization of climate adaptive farming techniques including drought and inundation resistant varieties and farming methods suited to different areas.
- Improve crop assessment methods to include scientific methods such as remote sensing, updated field techniques and CM Box (Crop Modeling and Monitoring Toolbox).
- In light of many farmers shifting crops, adopt measures to provide them with technical and entrepreneurship training so that they are better prepared to make optimal benefits and to mitigate any adverse impacts in case of shocks related to fluctuations in price and production.