Crop Situation Update

A joint assessment of 2011 summer crops and outlook of 2011/12 winter crops

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MINISTRY OF AGRICULTURE AND COOPERATIVES (MoAC)

WORLD FOOD PROGRAMME (WFP)

FOOD AND AGRICULTURE ORGANIZATION (FAO)

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Acknowledgement

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The field work was undertaken by the joint assessment team with staff from these three organizations as well as 30 WFP field monitors.

HIGHLIGHTS

- The preliminary estimation of the 2011 summer crop production shows an increase of 10.8% in total crop output compared to last year: 5,072 thousand MT of paddy, 2,179 thousand MT of maize and 315 thousand MT of millet, resulting in an increase of 13.7 percent, 5.4 percent and 4.1 percent respectively.
- The 2011/12 winter crop outlook is so far good, expecting a normal production due to timely and adequate rain/snowfall which is needed for the growing stage of the winter crops.
- As a result of the bumper harvest of summer crops and the good outlook of winter crops, food availability in the country is likely to improve in the FY 2011/12. However, the relatively low increase and marginal decrease in the 2011 summer crop production in the Mid-Western hill and mountains is likely to generate food deficits in these areas, leading to food insecurity.

BACKGROUND AND OBJECTIVES

Crop situation update is prepared by a joint mission of the Ministry of Agriculture and Cooperatives (MoAC), the World Food Programme (WFP) and the Food and Agriculture Organization (FAO). The update is prepared twice a year (for summer as well as winter crops) on a regular basis covering the whole country.

This round of crop situation update covers the 2011 summer crop production and the 2011/12 winter crop outlook as well as their implication for food security. The field work took place from the 18th December 2011 to the 3rd January 2012. Specific objectives of the joint crop mission are:

- to assess and verify the 2011 summer crop production situation including paddy, maize and millet;
- to assess the outlook of the 2011/12 winter crops; and
- to assess the likely impact on food security, in view of other income generating opportunities available in different geographical areas.

METHODOLOGY

The joint crop mission has analyzed national, district and field level data of the 2011 summer crop production using the data released by the Ministry of Agriculture and Cooperatives and findings from the field verification exercise conducted in selected districts, as well as reports and information released by the NeKSAP District Food Security Networks (DFSNs). Rainfall data was provided by the Department of Hydrology and Meteorology.

The field verification districts are purposively selected based on the following criteria: i) districts that have reported an unexpected decline in summer crop production, mainly caused by excess rainfalls with hailstorms and storms during the ripening period; ii) requests for the mission visit by the District Agriculture Development Offices (DADOs) to assess the impact of crop related problems on production, such as pest/diseases and other natural hazards (e.g. landslides, floods and drought), which occurred during the growing to early ripening period; iii) districts that were not visited by the previous joint crop missions. As a result, a total of 16 districts were selected across five development regions: Taplejung, Pachthar, Sunsari, Udaypur and Mahottari in the Eastern Development Region; Nuwakot, Dhading, Tanahu and Kaski in the Central and Western Development Region; Dang, Salyan, Rukum and Jumla districts in the Mid-Western Region; and Darchula, Dadeldhura and Kailali in the Far-Western Development Region.

Four teams were formed to conduct the field visit. Major tasks for the field visit teams were:

- to hold consultation meetings with respective DADOs and other district authorities using the standard district checklist;
- to interact with different stakeholders including Chief District Officers, Local Development Officers and district offices of the Chamber of Commerce and Industries to discuss issues related to agriculture and food security; and
- to interact with community members to verify the crop production situation and the understanding on the food security issues.

RAINFALL SITUATION FOR THE SUMMER AND WINTER CROPS

Monsoon, a typical South Asian meteorological phenomenon which originates from the Bay of Bengal of the Indian Ocean, affects the rainfall in the countries of this continent mainly Bangladesh, Bhutan, Nepal, the eastern and northern part of India and the northern parts of Pakistan. In 2011, monsoon entered in Nepal on the 13th June, which was 3 days later than the normal timing of the 10th June. It was relatively less active during the third week of July, but it became active from the second week of August until mid-October 2011. According to the Department of Meteorology and Hydrology, the average rainfall measured in various meteorology stations across the country was 110 percent, 96.3 percent, 96.7 percent, 101.3 percent compared to normal in June, July, August and September respectively. Owing to the timely rainfall during monsoon, the total area planted for paddy has increased by 2.3 percent, for millet by 3 percent and for buckwheat by 0.3 percent, compared to last year. The area planted for maize, however, has been declined by 3.8 percent.

Despite a normal rainfall across the country, some pocket areas of Dolpa, Jumla, Darchula, Rukum, Jajarkot and Kaski districts were affected by the excess rainfall including hailstorms and storms during the growing and harvesting periods, resulting in a decline of the summer crop production especially paddy, maize and millet.

Figure 1(a & b) shows the average monthly rainfall distribution from June to September in the past four years. The rainfall was relatively higher in June, but it was normal from July to September 2011. Compared to previous years, the average monthly rainfall was relatively low, but the distribution was very good with no major disasters during the monsoon.

Figure 1(a): Average rainfall distribution and intensity in the years 2008-2011

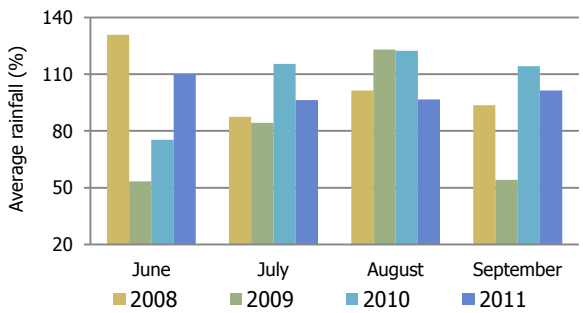
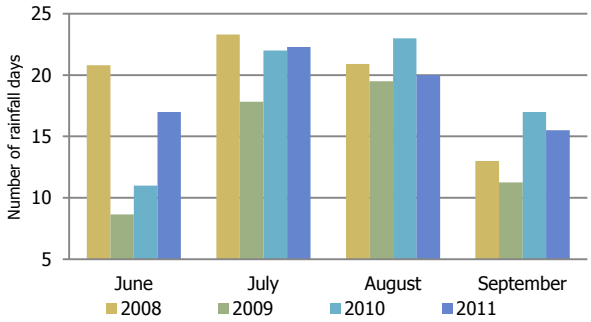


Figure 1(b): Number of rainfall days of more than 1mm in the years 2008-2011

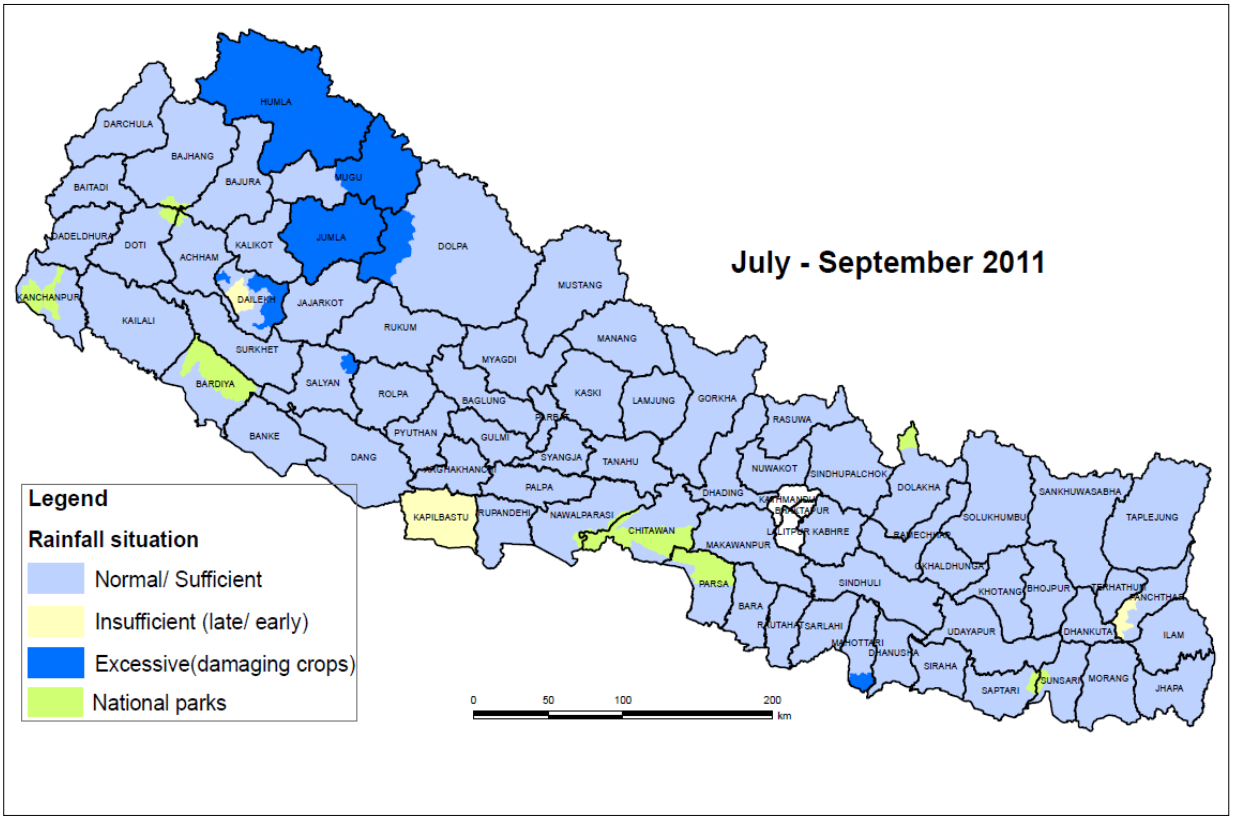


Source: Department of Hydrology and Meteorology

Map 1 illustrates the average rainfall across the country from July to September 2011. The rainfall was reportedly normal/sufficient in most parts of the country. Exceptions are found in some pocket areas: excessive rainfall was reported in Humla, Mugu, Jumla and Dailekh districts; and insufficient rainfall in

Kaplibastu that has resulted in the reduction of paddy production by 7.8 percent compared to the 2010/2011 season.

Map 1: Rainfall situation during July-September 2011



Source: NeKSAP, District Food Security Networks (DFSNs).

GLOBAL AND REGIONAL OVERVIEW OF CROP PRODUCTION

According to the latest forecast of FAO, world production of cereal grains in 2011 stands at 2,322.7 million MT, which is 3.5 percent above the previous year level. Such a bulk increase is attributed to a strong recovery in Europe (13.5 percent) and modest recovery in Asia (4.5 percent) and South America (0.3 percent). According to the FAO "Crop Prospects and Food Situation Report", the overall increase comprises a 6.5 percent rise in wheat production, a 1.9 percent rise in global coarse grain harvest and a 3.0 percent rise in rice production. In addition to the rise in cereal grain production, the total cereal utilization is forecasted to reach 2,310 million MT, 1.8 percent up from 2010/11.

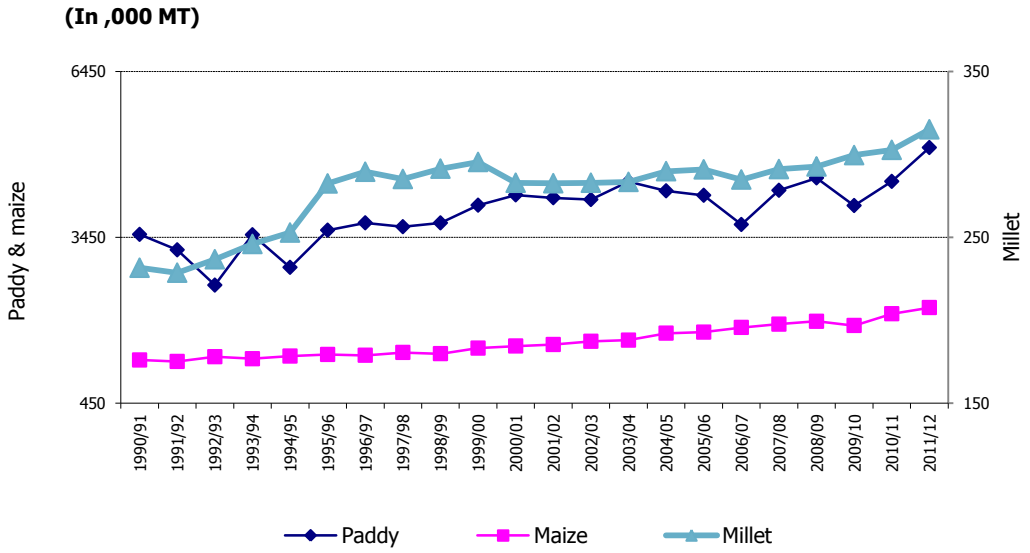
Despite severe localized flood damages of the main season crops in Thailand, Cambodia and other countries, prospect of rice production in the Asian region is anticipated to grow by 3.0 percent to 435 million MT in 2011. While in the South Asian region, rice output is also expected to rise compared to last year. India, for instance, is expected to surpass a record high 100 million MT paddy rice production this year compared to 95.3 million MT production in 2010/11. Likewise, rice output in Pakistan is expected to recover from the 2010 disastrous floods. Outlook for winter crop is so far satisfactory both at global and regional levels.

NATIONAL OVERVIEW OF CROP PRODUCTION

The preliminary estimation of the 2011 summer crop production shows an impressive increase of 10.8 percent in total crop output (MoAC, 2011). The production of paddy has increased by 13.7 percent to 5,072 thousand MT and the one of maize by 5.4 percent to 2,179 thousand MT. Both paddy and maize production have hit the highest records of the past 22 years. Millet production has increased by 4.1 percent to 315 thousand MT and buckwheat[1] production has also gone up sharply by 13.3 percent to 10 thousand MT this year. It is also worth noting that the productivity of the 2011 summer crops has also increased by 11.1 percent, 9.6 percent and 1.0 percent for paddy, maize and millet respectively compared to last year.

Figure-2 reveals the trend of summer crop production in Nepal since 1990/91. The trend shows higher fluctuations in paddy production compared to millet, while that of maize shows slightly an upward trend with few exceptions. Such a high fluctuation in paddy production could be the effect of monsoon rains and availability of improved seeds and fertilizers at the time of plantation and germination period compared to other crops.

Figure 2: Production trend of summer crops in Nepal since 1990/91



Source: Agri-Business Promotion and Statistics Division (ABPSD), MoAC 2011/12

Districts in the terai belt are the major producers of paddy, accounting for some 73 percent of the national paddy production. Districts with larger paddy production include: Jhapa (321,840 MT), Rupandehi (301,000 MT), Morang (277,610 MT), Bara (221,340 MT), Kapilbastu (207,350 MT) and Kailali (203,050 MT). Hill districts produce some 70 percent of the national maize production, among which Syangja (927,550 MT), Illam (77,500 MT), Bhojpur (74,370 MT) and Makawanpur (72,562 MT) are the major maize producing districts in the FY 2011/12. Likewise, millet production is concentrated in the hilly districts. It is worth noting that buckwheat is considered as both a summer and winter crop as it is cultivated in summer for the mountain belt and in winter for the terai belt because of variations in climate.

[1] Buckwheat is included in both summer and winter crops. In Terai and low land, it is cultivated in the winter, while in the mountain region, it is cultivated in the summer.

Table 1 presents the area, production and yield of major summer crops of paddy, maize, millet and buckwheat at sub-regional levels and percentage changes compared to last year. Compared to last year, paddy production has increased almost all ecological belts and development regions and the rate of increase is higher in the terai belt (16.2 percent) than hill and mountain belts whereas the highest increase in the production of maize and buckwheat is found in the hill belt (8.3 percent and 37.7 percent respectively). For the millet production, the mountain belt has the highest percentage of increase (12.7 percent). Concerning the development region, the Eastern region has demonstrated the highest percentage increase in paddy production (24.4 percent) with 14.9 percent increase in the area cultivated for paddy compared to last year. Likewise, the highest increase of maize production is observed in the Central region (15.8 percent), while that of millet is found in the Mid-Western region (13.9 percent). It is worth noting that the area cultivated for maize has been declined by 3.8 percent at national level, while for other crops the area cultivated has increased compared to last year.

Table 1: Cereal summer crop production status in 2011/12

1 (a): Cereal summer crop production (Area in, 000 ha, production in, 000 MT and yield in MT/ha)

Belt/Region	Paddy			Maize			Millet			Buckwheat		
	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield
Eco-Belt												
Mountain	68.1	154.5	2.3	98.7	215.3	2.2	58.7	63.1	1.1	3.5	3.9	1.1
Hill	395.5	1,202.8	3.0	617.7	1,528.5	2.5	209.9	241.8	1.2	4.8	4.2	0.9
Terai	1,068.0	3,715.0	3.5	155.0	435.6	2.8	9.4	10.2	1.1	2.0	1.9	0.9
Development Region												
Eastern	342.2	1,117.6	3.3	54.6	154.5	2.8	5.0	5.7	1.1	1.8	1.7	1.0
Central	410.3	1,446.1	3.5	211.8	599.1	2.8	64.4	73.2	1.1	2.0	1.9	0.9
Western	312.7	1,085.1	3.5	214.0	566.5	2.6	95.1	105.6	1.1	3.0	3.5	1.2
Mid-Western	177.3	638.8	3.6	146.1	302.1	2.1	26.0	29.0	1.1	1.9	1.8	0.9
Far-Western	160.5	470.5	2.9	49.0	96.0	2.0	16.7	16.8	1.0	0.1	0.1	0.9
NEPAL	**1,531.5**	**5,072.2**	**3.3**	**871.4**	**2,179.4**	**2.5**	**278.0**	**315.1**	**1.1**	**10.3**	**10.0**	**1.0**

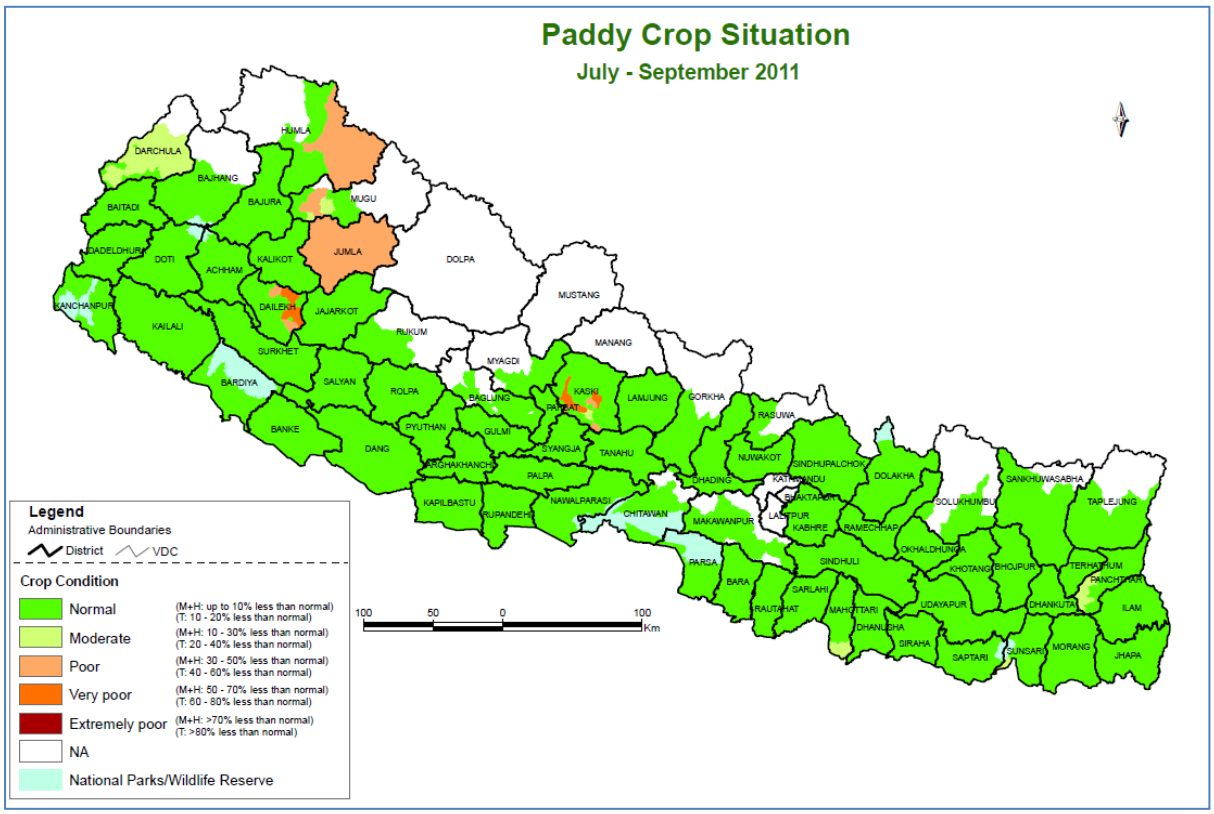
1 (b): Percentage change compared to last year

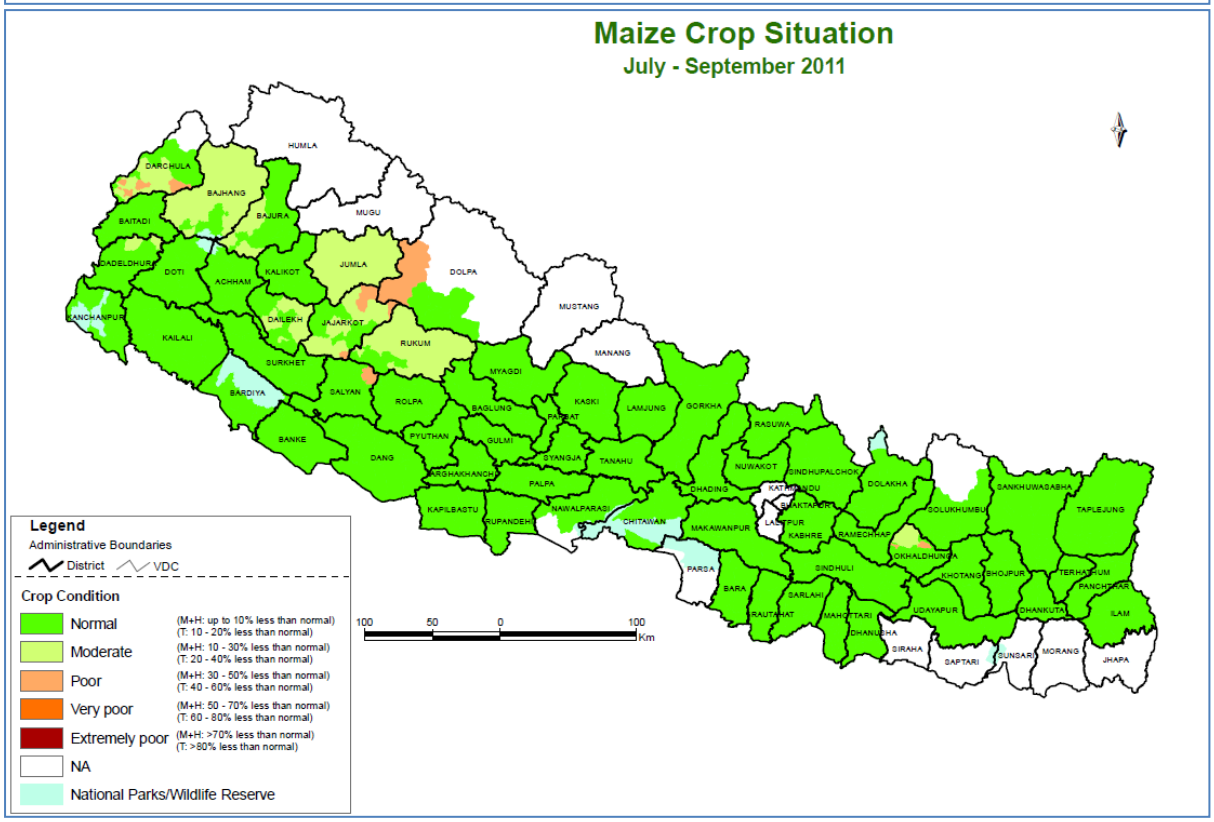
Belt/Region	Paddy			Maize			Millet			Buckwheat		
	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield
Eco-Belt												
Mountain	2.0	12.2	10.0	0.1	2.8	2.7	9.0	12.7	3.5	13.5	13.1	-0.4
Hill	-2.8	6.7	9.9	-0.9	8.3	9.2	1.7	2.3	0.5	-2.6	37.7	41.4
Terai	4.4	16.2	11.3	-16.0	-2.4	16.2	-2.2	-0.9	1.3	-11.5	-18.5	-8.0
Development Region												
Eastern	14.9	24.4	8.2	-0.6	8.5	9.2	-7.8	-5.6	2.4	30.7	28.4	-1.8
Central	-2.0	16.0	18.3	-0.7	15.8	16.6	2.1	6.2	4.1	-20.0	48.0	85.0
Western	-6.8	1.1	8.4	-9.8	-0.9	9.9	-1.2	-0.2	1.1	-4.6	-1.1	3.6
Mid-Western	2.0	16.3	14.0	-4.8	-6.5	-1.7	19.5	13.9	-4.6	6.2	1.4	-4.5
Far-Western	7.4	14.4	6.6	-10.2	-1.4	9.9	3.0	0.9	-2.0	34.6	54.7	15.0
NEPAL	**2.3**	**13.7**	**11.1**	**-3.8**	**5.4**	**9.6**	**3.0**	**4.1**	**1.0**	**0.3**	**13.4**	**13.0**

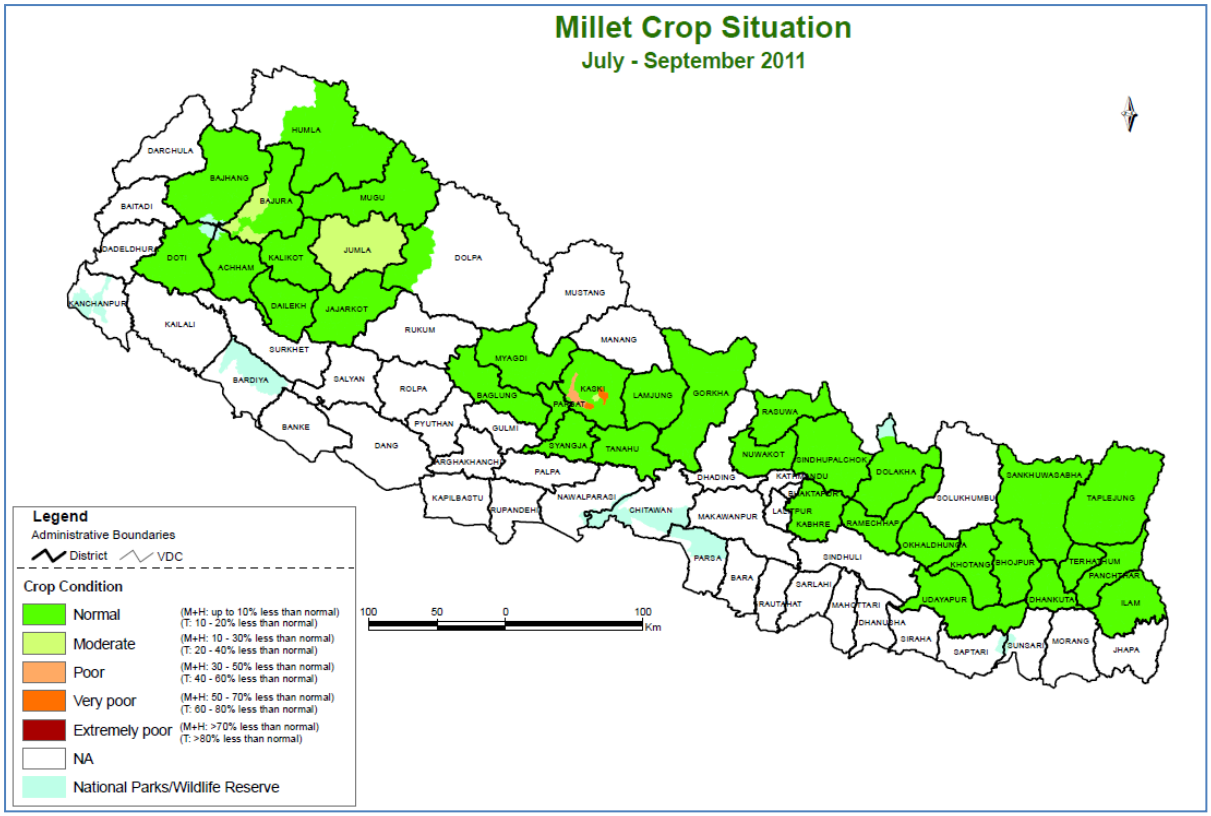
Source: Agri-business Promotion and Statistics Division (ABPSD), MOAC 2011

Map 2 presents the 2011 summer crop production situation of paddy, maize and millet by VDC as reported by the NeKSAP DFSN.

Map 2: 2011 summer crop production by VDC







Source: NeKSAP District Food Security Networks

Findings from the field mission indicate that the increase in summer crop production is primarily due to: timely and adequate rainfalls from the plantation to the germination period; relatively timely availability of fertilizers; increase in the use of improved seeds; and increase in the area cultivated (especially paddy and millet) and less damage of crops by floods and other natural hazards compared to the previous years. In addition, various crop production enhancing programmes as well as regular agriculture extension programmes have significantly contributed to the increased production[2]: e.g. "irrigation and water resource management (IWRMP)"; "community managed irrigated agriculture sector project (CMIASP)"; "commercial agriculture development project (CADP)" in the eastern hills; project for agriculture commercialization and trade (PACT), small and cooperative managed irrigation projects.

2011/12 Winter Crop Production Outlook

Outlook of the 2011/12 winter crops such as wheat, barley and vegetables is reportedly good so far due to the prolonged monsoon which has contributed to maintaining the soil moisture for a longer period, resulting in the plantation of winter crops on time. Moreover, the timely occurrence of winter rainfall (snow fall for the mountain area) is expected to contribute to a timely germination and growth of winter crops, which is expected to result in a favourable winter production in 2012 across the country.

According to the findings from the field mission, the plantation and the growth of winter crops such as wheat, barley, vegetables, lentils etc. in the sampled districts are so far good. Cold wave that occurred in the terai belt during the first half of December 2011 has slightly damaged crops, particularly vegetables and potato.

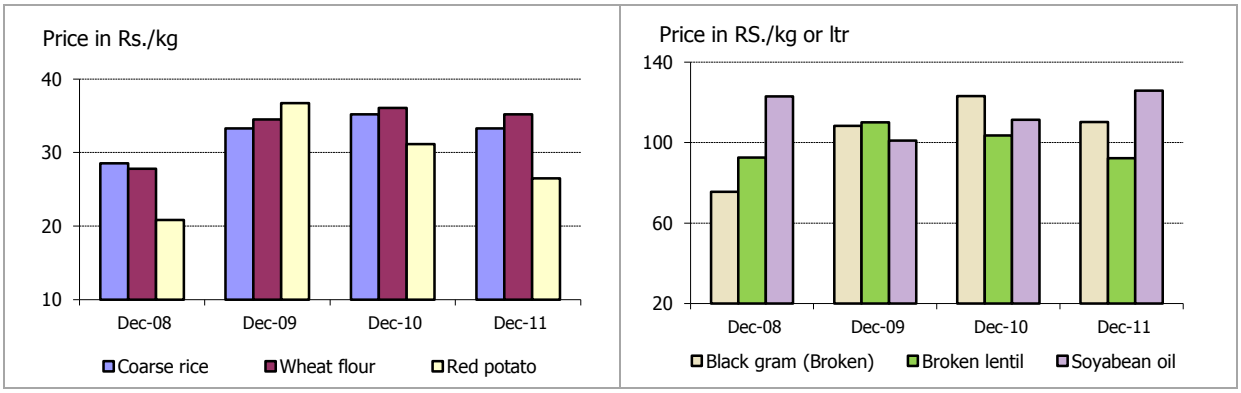
[2] These programmes have reportedly contributed to the increase in production of cereals as well as vegetables including high value crops.

However, the occurrence of rain/snowfall during the first week of January 2012 is expected to contribute to a better growth of winter crops thus a normal production of winter crops is expected for this season.

FOOD MARKET SITUATION

Figure 3 presents the average price of major food items over the past four years, indicating nominal fluctuations during the period. It is noteworthy to say that the average prices of coarse rice, wheat flour and red potato declined by 5.4 percent, by 2.5 percent and by 14.9 percent respectively compared to December 2010. Likewise, the average prices of black gram and broken lentil have also dropped by more than 10 percent. Such decline in food commodity prices is primarily attributed to the good harvest in the year of 2010/11 as well as relatively smooth operation of transportation services across the country compared to last year. The exception is the price of soya bean oil, which has increased by 13.0 percent compared to the same period last year.

Figure 3: Staple food prices December 2008/09/10/11



Source: ABPMDD, MoAC

Despite the relative stability in cereal prices over the past one year, the average cost of production[3] shows an upward trend. Such trend is relatively moderate for the paddy production on the irrigated farmland in the terai belt compared to hills. For instance, the average cost per quintal of paddy production has increased slightly from Rs. 747 in 2009/10 to Rs. 749 per quintal in 2010/11 in the terai. Likewise, the average cost of maize production on un-irrigated land has increased from Rs. 565 in 2009/10 to Rs. 582 per quintal in 2010/11 in the terai, whereas in the hills, it has increased from Rs. 601 in 2009/10 to Rs. 985 per quintal in 2010/11. The increase in the average cost of production per quintal could be attributed to the rise of input prices such as fertilizers, labour wages and seeds. In contrast to the increasing cost of production of cereal crops, there is a wide concern that farmers could not get a reasonable price for paddy, particularly in the terai districts due to the competition with the cheaper paddy from India.

FOOD SECURITY SITUATION AND OUTLOOK

The overall situation of food balance and crop production is good due to the bumper harvest of the 2011/12 summer crops (up by 10.8 percent compared to last year) following the good harvest of both summer and winter crops in 2010/11 where the national edible cereal balance showed a surplus of 443 thousand MT[4].

[3] Source: ABPMDD, Marketing Research & Statistics Management Program, DoA, MoAC.

[4] Nepal has experienced cereal food deficits in four of the past six years (since 2005/06) and the highest food deficit of 330 thousand MT was reported in 2009/10. "*Amendment to the Crop Situation Update*", MoAC/WFP/FAO, November 2011

However, the impact of the good harvest at national level may not be translated into an improved food security across the country and one needs to analyze the situation at sub-regional and district levels. For instance, in the Mid-Western Mountain region, one of the most food insecure regions in Nepal, the production of paddy and maize has declined by 17.0 percent and by 22.1 percent respectively: in Jumla district, the production of paddy and maize has dropped by 26.8 percent and by 7.3 percent respectively; in Kalikot district, the production has declined by 22.7 percent and 46.7 percent for paddy and maize respectively. Likewise, Rukum and Jajarkot districts in the Mid-Western Hill area have also been affected by the loss of summer crop production: in Rukum district, the production of paddy and maize has decreased by 14.8 percent and by 26.4 percent respectively; in Jajarkot district, the production shows a decline of 12.6 percent for paddy and 10.6 percent for maize.

Despite the reduction in summer crop production in some districts, food supply situation across the country is reportedly stable to date. This is mainly due to a smooth operation of transportation services and seasonal access of roads and trails in many remote areas of the mountain and hill districts; wage employment opportunities created by the government and organizations including PAF, WFP, FINNIDA, RAP and Helvetas; and income from remittances[5].

The trade data[6] for the first quarter of the FY 2011/12 shows that the import of cereal grains has declined by 5.3 percent compared to the same period last year. The reduction could be attributed to the good harvest of summer crops in Nepal. It is worth noting that India has partially lifted its export ban on non-basmati rice, which is expected to increase the access and availability of food across the South Asian region.

CONCLUSIONS

The 2011 summer crop preliminary estimates indicate a significant increase in production compared to last year. The total summer crop output has increased by 10.8 percent, in which the production of paddy and maize has gone up by 13.7 percent and by 5.4 percent respectively, setting a record high production for paddy (5,072 thousand MT) and maize (2,179 thousand MT). This bumper harvest of summer crops is mainly attributed to favourable precipitations across the country, government support programmes and projects to enhance the agriculture production combined with relatively timely availability of seeds and fertilizers, less damage of summer crops by floods and other natural hazards and increase in the use of improved seeds, particularly in the terai belt which is the main crop producing belt of the country.

The 2011/12 winter crop outlook is so far good across the country due to the timely rainfall. Although the cold wave that occurred during the first half of December 2011 has partially affected potato and other vegetable crops in the terai belt, rainfall/snowfall in January 2012 is expected to contribute to a normal production of the 2011/12 winter crops.

Despite the reduction of the 2011 summer crop production in a few districts, the food security situation across the country is reportedly stable so far, due to the good summer harvest, a smooth operation of transportation services and availability of other income sources including wage labour, remittances and sales of cash crops/ NTFP. The food security situation will be monitored closely through the NeKSAP.

[5] Nepal Food Security Bulletin Issue 33, November 2011, MoAC/WFP

[6] Source: Trade and Export Promotion Centre, Ministry of Commerce and Supplies.

ANNEX: CROP SITUATION IN SELECTED DISTRICTS VISITED BY THE JOINT MISSION

Eastern Development Region: The team visited five districts (Taplejung, Pachthar, Sunsari, Udaypur and Mahottari) in the Eastern Region. The overall crop production situation is found to be good: the summer crop production has increased by 21.4 percent in the region. However, some districts have faced the problem of crop loss. For example, few VDCs (Aangna, Mauwa, Durdimba and Yasok) in Pachthar district are affected by the loss of paddy crop during the harvesting period. Cardamom is one of the major cash crops in the hill districts of the region. Farmers did not get a reasonable price for their products this year compared to last year: the price of cardamom was about Rs. 75,000 per *mun* (1 *mun* = 40kg) last year, while it is about Rs. 35-40 thousand this year, resulting to a decline in income from the sale of cardamom. Likewise, farmers (in Hangdewa VDC of Taplejung district) who produce potatoes and also sell potato seeds, have to compete with cheap and low quality potatoes imported from Terai, thereby reducing their expected income compared to last year. Many farmers in the northern belt of Udaypur district where food insecurity was prevalent in the past are now engaged in cash crop production such as ginger and horticulture like orange and have started to get benefit from their sales. Farmers from neighbouring VDCs of the district headquarters (Mahottari and Udaypur) are reportedly getting a good benefit from vegetable farming due to an increasing demand for vegetables at the district headquarters. The population in the remote hilly VDCs (Okhale, Lekhgaon, Iname, Rupataar, Nametaar and Thanagaon) of Udaypur district reportedly experienced a short-term food insecurity as a result of the law enforcement: district authorities carried out an operation and destroyed all marijuana plants that were in the early stage before forming hashish (hashish is considered as illegal in Nepal). Those farmers who were partially depend on marijuana farming lost their income as a result as they used to sell marijuana to the traders from India and earn cash to maintain their livelihoods. Mahottari district experienced floods during summer but its impact was relatively marginal as the floodwaters receded after a few days. Despite a good prospect of vegetable, other cash crops and horticulture farming, cold wave that occurred during the mid-December 2011 has resulted in a loss of some crops such as potato, particularly in the terai districts.

Central and Western Development Region: Four districts, namely Nuwakot, Dhading, Tanahu and Kaski, are visited from 18-23 December 2011. The 2011 summer crop production is found to be good overall. The Western Region, however, has observed only a marginal change in total production compared to last year: paddy production has increased by 1.1 percent, while that of maize has declined by 0.9 percent. This marginal change in the summer crop production could be mainly due to a low rainfall in Kapilbastu district which is one of the largest paddy producing districts of the country, resulting to a decline of paddy production by 7.8 percent and maize production by 56.8 percent in the district compared to last year. Moreover, excess rainfalls with hailstorms have also damaged ripening paddy and millet crops in 15 VDCs of Kaski district. For example, excess rainfalls with hailstorms and storms have damaged more than 50 percent of ripening paddy in Namarjung, Sildujure, Mauja, Sarangkot, Kaskikot, Dhampus, Lumle, Dhikurpokhari and Bhadauretamagi VDCs, while the loss of ripening paddy was about 10 to 35 percent in Armala, Puranchaur, Hemja, and Bharatpokhari VDCs including some areas of Pokhara sub-metropolitan city. However, the production loss due to hailstorms was about 1 percent in aggregate. In the Central Region, the 2011 summer crop production has experienced a significant increase of 16.0 percent, 15.8 percent and 6.2 percent for paddy, maize and millet respectively. Outlook of the winter crop is so far good across the region with few exceptions: e.g. Panghare community in Nilkantha VDC, Dhading district reported the production loss of vegetable due to excess rainfall during the growing period. According to the community people, the major constraints in the agricultural sector are lack of irrigation facilities, unavailability of fertilizers at the time of plantation and germination, and the continuous rise of input prices.

Mid-Western Development Region: The team visited Dang, Salyan, Rukum and Jumla districts in the Mid-Western region. The overall production of the 2011 summer crop is good: paddy and millet production has increased by 16.3 percent and by 13.9 percent respectively in the region, while that of maize has dropped by 6.5 percent compared to last year. Out of the four sample districts, Jumla and Rukum districts were hit by excess rainfall and hailstorms during the germination as well as harvest period which resulted crop loss in these districts. As a result of excess rain, landslides (particularly in Rukum) and hailstorms (particularly in Jumla), paddy production has declined by 26.8 percent in Jumla and 14.8 percent in Rukum. Likewise, maize production has also dropped by 26.4 percent in Rukum and 7.3 percent in Jumla. Despite a decline in production of the 2011 summer crops, outlook of winter crops is so far good, expecting normal harvest. However, Jipu village in Pipal VDC of Rukum district encountered with the problem of cutworm infestation on wheat crops which will likely decrease the wheat production by 10 to 70 percent. This needs to be monitored closely in the future.

Far-Western Development Region: The team visited Darchula, Dadeldhura and Kailali districts in the Far-Western region from 24-31 December 2011. The overall production situation of summer crops 2011 is found to be satisfactory, indicating a 14.4 percent increase in paddy and a 3.0 percent increase in millet production in the region. However, the production of maize has declined by 1.4 percent compared to last year. It is worth noting that the region is one of the most vulnerable regions of Nepal and many districts in the hill and mountain do not produce sufficient food for their consumption. During the field visit, many farmers expressed their concern over the winter crop production outlook due to the shortage of rainfall to date. Major problems in the agricultural sector in the region, cited during the community interaction, are: lack of irrigation facilities and unavailability of fertilizers and improved seeds at the time of plantation and germination. According to farmers, these problems often constrain them from shifting to commercial farming, including cash and high value crops. The overall food supply situation is so far normal and prices are relatively stable till now.

Ripening crop damaged by excess rainfalls with hailstorms in Dhampus VDC, Kaski district

Potato crop damaged by cold wave in Triyuga Municipality, Udaypur district

Hat Bazaar (weekly market) in Phidim, Pachthar district

Vegetable farming in Bardaha, Mahottari district