Crop Situation Update - 6

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Highlights of the FAO/WFP Crop and Food Supply Assessment Mission

At the request of the Ministry of Agriculture and Cooperatives of Nepal (MoAC), a joint FAO/WFP Crop and Food Supply Assessment Mission (CFSAM) was conducted from 20 March to 8 April 2007. The overall objective of the assessment was to develop an understanding of the current and prospective food security situation in order to guide the Government and the international community on what actions should be taken to minimize the impact of local disasters such as droughts, floods and infestations on the food security situation of vulnerable communities.

During the assessment, over 20 districts across four development regions and three ecological zones (Terai, Mountain and Hill) were visited with particular attention given to drought-affected areas in the Mid- and Far-West and areas in the Terai affected by drought and/or floods in 2006. The mission assessed the 2007 winter cereal crops, current food availability, market access, and food utilization situations at the household, community, and district-level. In addition, the Mission conducted consultations with relevant Government institutions, international agencies, donors, NGOs and the private sector and reviewed data previously collected on food security from a variety of sources. The final result has been published in the joint FAO/WFP, "Special Report: FAO/WFP Food Security Assessment Mission to Nepal," available at FAO's Website: http://www.fao.org/docrep/010/ah869e/ah869e00.htm.

This Crop Situation Update provides a summary of the key findings of the Mission report and highlights from the winter crop production.

Winter Crop Production

Much of the country received either average or above average rainfall from October through December resulting in good winter crop seed germination and plant growth. Because of timely and sufficient rainfall over the winter, a forecasted 7% increase in wheat and barley production is expected compared to average winter production levels over the last 5 years.

Despite the expected increase in national production levels for winter wheat and barley, communities in the Mid-Western Hills (Rukum, Rolpa, Pyuthan, Dailekh and Jarjarkot) as well as communities in Bajura in the Far-Western Hills again experienced lower production levels do to local drought and hailstorms. For many of the people in these communities, this represents the third year of extremely poor crop production or crop failure. Consequently, in August WFP will resume delivery of emergency food rations to cover the food gap for the worst-affected communities.

EARLY PROSPECTS FOR SPRING PRODUCTION

Following the overall improvement in the rainfall situation across Nepal, it is expected that spring paddy production on irrigated land should be above average.

Summary of 2006/2007 Crop Production

FOOD DEFICIT FOR 2006/2007

The Mission confirmed previous estimates from the National Crop and Food Security Assessment conducted by the MoAC (see Crop Situation Update - 4) of a total cereal production deficit (including potatoes in cereal equivalent) for the 2006/2007 crop year of 225,000 metric tons compared to a deficit of only 23,000 metric tons for the previous agricultural year. Forty-two out of 75 districts are estimated to be food deficit for this time period. Even with anticipated commercial imports of 110,000 metric tons, combined with food assistance from NFC and WFP, there remains a national cereal shortage of nearly 12,600 metric tons. As reported in previous Crop Updates and Assessments, this significant decline in overall cereal production is based upon the combination of drought and flooding that reduced national paddy production (Nepal's main cereal crop), by 13% compared to average.

Table 1 highlights 2006 paddy production levels as compared to average production levels over the last five years. Traditionally, many of these districts produce significant paddy surpluses. The poor production level of paddy in 2006/2007 is a key cause for the overall cereal deficit.

Table 1: Changes in paddy production in the most affected districts

Region/District	Changes of 2006 over the aver of previous five years %
Eastern Region	
Saptari	-46
Siraha	-38
Udayapur	-27
Bhojpur	-21
Central Region	
Sindhuli	-28
Kavre	-22
Dhanusha	-29
Mahottari	-38
Sarlahi	-21

Source: MoAC

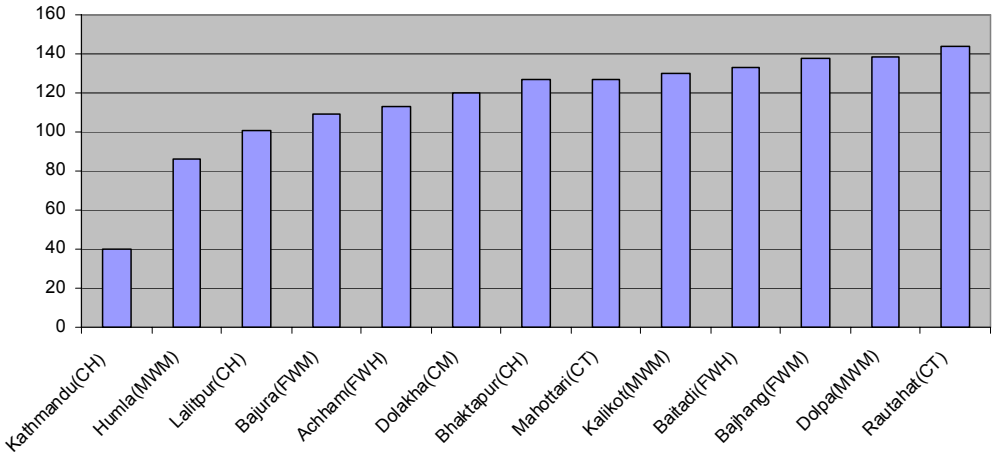
Table 2: Nepal – Major cereal production by Region and Zone, 2006/07

Region/Zone	Cereal production in 2006/07 (tonnes)							% of total production over	
	Rice[1/]	Maize	Millet	Wheat	Barley	Potato[2/]	Total	2005/06	Ave
Eastern Mountain	28 343	69 448	15 175	11 388	689	22 944	147 986	99.9	105.7
Eastern Hills	114 914	271 603	52 188	50 660	1 277	51 724	542 366	96.3	102.9
Eastern Terai	561 562	111 750	6 255	185 073	49	68 001	932 690	84.2	85.8
Central Mountain	27 434	62, 397	24 195	25 593	627	17 776	158 022	99.4	102.1
Central Hills	181 133	292 542	40 316	117 434	1 853	62 680	695 958	99.1	100.3
Central Terai	513 355	106 636	4 350	328 909	679	59 287	1 013 217	94.8	91.8
Western Mountain	0	1 145	7	1 534	834	2 045	5 565	96.4	94.9
Western Hills	199 360	452 301	106 546	116 055	3 963	30 036	908 261	97.9	106.4
Western Terai	279 796	29 042	730	178 992	281	16 262	505 103	100.5	98.4
Mid-Western Mountain	7 699	13 690	8 355	18 142	8 343	8 124	64 352	112.9	110.4
Mid-Western Hills	75 984	198 662	13 936	109 398	5 625	15 377	418 983	102.9	106.4
Mid-Western Terai	172 884	92 385	135	108 388	86	14 090	387 968	94.5	102.2
Far-Western Mountain	14 637	16 929	5 675	29 278	4 177	3 636	74 332	108.2	106.6
Far-Western Hills	35 613	37 003	6 570	60 495	1 879	5 665	147 226	111.1	111.4
Far-Western Terai	179 832	43 393	380	115 880	219	11 000	350 704	110.4	115.1
Eastern Region	704 819	452 800	73 618	247 120	2 015	142 669	1 623 041	89.2	92.5
Central Region	721 922	461 575	68 861	471 937	3 159	139 744	1 867 198	96.8	95.7
Western Region	479 155	482 488	107 283	296 581	5 078	48 344	1 418 929	98.8	103.4
Mid-Western Region	256 566	304 737	22 426	235 928	14 054	37 592	871 303	99.6	104.8
Far-Western Region	230 082	97 325	12 625	205 653	6 276	20 301	572 261	110.3	113.0
NEPAL	**2 392 545**	**1 798 925**	**284 813**	**1 457 218**	**30 582**	**388 649**	**6 352 732**	**96.6**	**99.0**

Source: estimated by the mission
1/ Milled rice (at milling rate of 65 percent).
2/ Cereal equivalent (at ratio of 20 percent).

Table 2 shows the aggregated production situation for major food crops in 2006/07. The total food crop production in cereal equivalent, including potato, is forecasted at 6.35 million tons, 3.4 percent below the previous year's production and 1 percent lower compared to the average of the previous five years. Most reductions took place in the Eastern Terai (14 percent), Central Terai (8 percent), and Western Mountains (5 percent) as noted earlier.

Figure 1: Districts with Per Capita Food Production less than 150 kg, 2006/07



Source: estimated by the mission

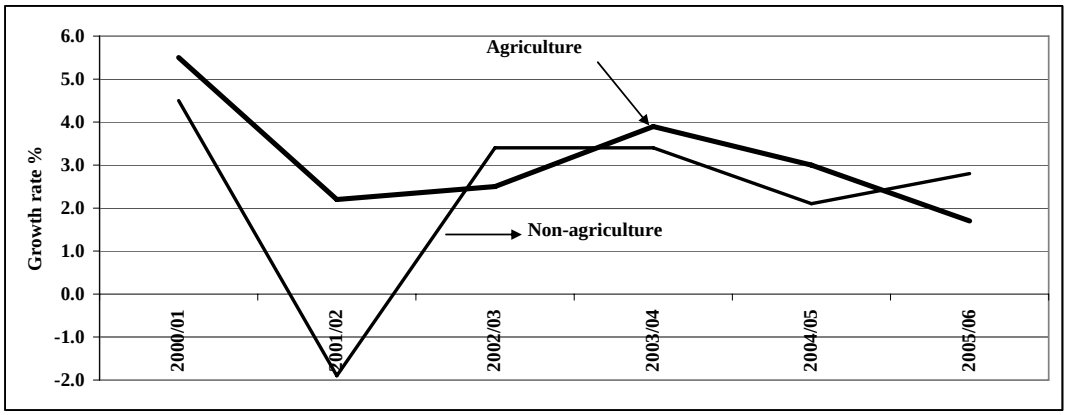
Compared to total cereal production, per capita production in 2006/07 declined by almost 6% over the last year (Table 3). Nationally, the average per capita production level is 209kg. As shown in Figure 1, outside of the highly urbanized districts of Kathmandu, Lalitpur, and Bhaktapur, districts with the lowest per capita production levels are concentrated in the chronically food insecure Hills and Mountains of the Far- and Mid-West.

DISTURBING TRENDS

VOLATILITY OF AGRICULTURAL PRODUCTION AND GDP

Agriculture provides a livelihood for more than 80% of the Nepali population, and contributes 40% to GDP. The processing of agricultural products still plays a dominant role in industrial pursuits. Consequently, agricultural production levels play a key role in determining Nepal's GDP. This linkage also impacts the availability of economic activities, particularly for the rural poor.

Figure 2: Trends in the growth rate of real agricultural and real non-agricultural GDP



Source: Economic Survey, 2005/06, Nepal.

Figure 2 shows the growth rates of real agricultural and real non-agricultural GDP from 2000-2006. The average annual growth rate of agricultural GDP during this period was only 2.8%. Equally worrying is the high degree of fluctuation of the agriculture and consequently the non-agriculture GDP rates from year to year. The agricultural GDP growth rate was 5.5% in 2001/02 and only 2.2% in the following year. In 2003/04 it was 3.9%, only to slide back in the next year. The performance in 2005/06 was the worst in recent years.

CROP PRODUCTION DECREASES

As shown in Table 3, over the last five years, average national per capita cereal output fell by 17kg per person or 7.4%, highlighting the fact that crop production levels have not increased at the same rate as Nepal's population. This coupled with slow economic growth and Nepal's poverty level suggests chronic food insecurity will remain an issue without urgent and significant investment. As in 2006/2007, lack of food over the last few years has been the severest and most chronic in the Mid-West and Far-West Hill and Mountain Regions. Crop production levels in these areas are vastly inadequate, with lean seasons averaging up to six months. Lack of adequate infrastructure, developed markets and high poverty levels limit the ability of the population to supplement poor crop production by purchasing food during gap periods.

Table 3: Nepal – Per capita cereal production[1/] by Group and Region

	2002/03 kg	2005/06 kg	2006/07 kg	2001/02 – 2005/06[2] kg	2006/07 over average %	2006/07 over 2005/06
Eastern Mountain	287	303	299	292	102.6	98.8
Eastern Hills	276	280	265	268	99.0	95.0
Eastern Terai	277	264	216	269	80.2	82.0
Central Mountain	228	230	225	231	97.4	97.8
Central Hills	163	151	146	158	92.5	96.4
Central Terai	223	208	192	226	84.8	92.3
Western Mountain	208	175	165	185	89.0	94.0
Western Hills	245	272	262	257	102.2	96.5
Western Terai	226	217	212	234	90.5	97.7
Mid-Western Mountain	150	142	158	150	105.5	111.6
Mid-Western Hills	215	218	220	218	101.0	101.1
Mid-Western Terai	235	254	233	248	94.0	91.7
Far-Western Mountain	137	134	143	141	101.6	106.8
Far-Western Hills	130	130	142	134	106.0	109.1
Far-Western Terai	222	230	244	238	102.7	106.3
Eastern Region	278	271	237	271	87.5	87.3
Central Region	197	184	173	196	88.5	94.2
Western Region	237	250	242	247	97.7	96.9
Mid-Western Region	216	225	219	223	98.1	97.3
Far-Western Region	176	183	197	186	105.8	107.9
Nepal	**224**	**222**	**209**	**226**	**92.6**	**94.3**

Source: Calculated by the Mission.
1/ Estimated based on: a) cereal production including potato in cereal equivalent, b) excluded losses and seed use, and c) population projected based on 2001 data and growth rate between 1991 to 2001.
2/ Five year average for rice, wheat, maize, millet, barley and two year average (2002/03 and 2005/06) for potato.

HIGH RATES OF UNDERNOURISHMENT

Undernourishment refers to the condition of people whose dietary energy consumption is continuously below a minimum dietary energy requirement for maintaining a healthy life and carrying out light physical activity.

In order to better understand the incidence of undernourishment in Nepal, the mission calculated the per capita mean dietary energy consumption (MDEC) at the national and regional level, based upon data provided by the Central Bureau of Statistics of Nepal (CBS).

At the national level, MDEC is estimated at 2405 kcal/per person/day – only slightly above the minimum requirement level of 2,124 kcal/per person/day used by the CBS. Using this number as the threshold for defining undernourishment, an estimated 40.7% of the Nepal population is undernourished, as shown in Table 4. At the aggregate level, the proportion of undernourished population is highest in the Mid-Western region (48.5 %), followed by the Far-Western region (47.5 %), while the Western region has the lowest undernourishment incidence (33 %). Across the belts, the Mountains have the highest undernourishment at 46.3 %, compared with 41.8 % in the Hills and 38.4 % in the Terai belt.

Of even more concern is the proportion of population with severe under-consumption as indicated by a per capita dietary energy consumption level of under 1600 kcal/day. As shown in Figure 3, Food consumption in the Mid-Western Mountains and Far-Western Hills is in a crisis situation with more than 30% and 20% respectively of the rural population consuming less than 1600 kcal per day, or 25% below the caloric recommendations to maintain basic health. Again, these numbers indicated the severity of chronic food insecurity faced by populations in the Hill and Mountain areas of the Mid- and Far-West.

Table 4: Rural Nepal – Mean per capita dietary energy consumption and undernourishment incidence by group

		Mean per capita dietary energy consumption		Undernourishment incidence
		Kcal/person/day	CV	Below 2 124 Kcal/person/day %
Nepal		2 405	0.776	40.7
Urban		2 419	0.788	40.5
Rural		2 400	0.771	40.8
Rural	East	2 427	0.783	40.7
Rural	Central	2 382	0.754	40.1
Rural	West	2 534	0.718	33.0
Rural	Mid-West	2 310	0.875	48.5
Rural	Far-West	2 250	0.689	47.5
Rural	Mountain	2 297	0.784	46.3
Rural	Hill	2 402	0.782	41.8
Rural	Terai	2 426	0.756	38.4

Source: Estimated by the mission based on 2003/04 NLSS data.

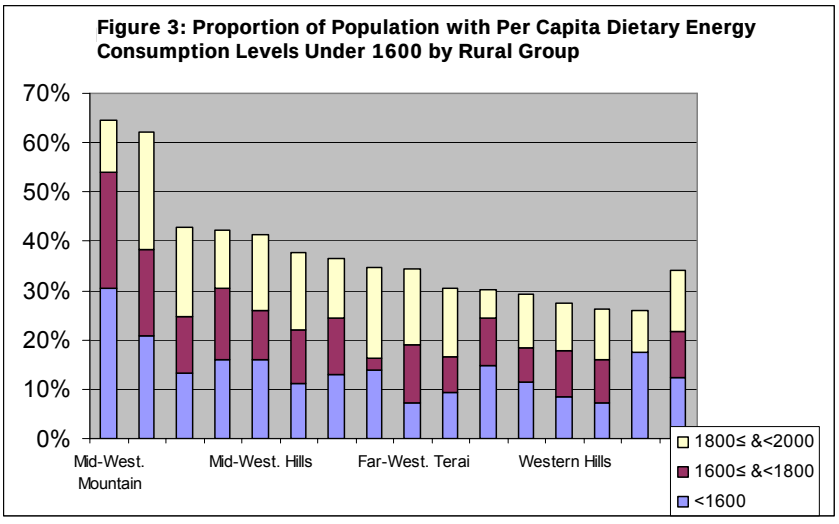
MALNUTRITION AMONG CHILDREN

Despite slight improvements in aggregated malnutrition indicators at the national level, levels are still at a crisis situation. Stunting levels (a measure of chronic malnutrition) are estimated at 49%, representing only a two percent decrease over the last five years. More progress has been made in the proportion of children underweight (a measure of both chronic and acute malnutrition). The proportion of underweight children is at 39%, representing a 9% decrease over the last five years. In spite of this progress, wasting rates (a measure of acute malnutrition) have increased from 10% to 13% (DHS, 2006).

Considerable geographic variation in the incidence of malnutrition can be observed. Detailed malnutrition maps were published by CBS/WFP/WB in September 2006. According to this, the highest incidence of stunting and underweight is found in the Mountains and Hills areas of the Far- and Mid-Western Development Region, where more than 60 percent of children are stunted and 50 percent are underweight. Limited availability of food and high poverty rates provide an explanation for these high stunting and underweight rates.

Wasting is very high in the Terai, where on average 17% of children suffer wasting. The percentage of affected children in the Far-Western and Central Terai is as high as 20% and 21%, respectively. Wasting levels above 15% usually indicate a humanitarian disaster and justify blanket feeding programmes as an emergency response.

Figure 3: Proportion of Population with Per Capita Dietary Energy Consumption Levels Under 1600 by Rural Group



Source: estimated by the mission based on 2003/04 NLSS data

MISSION RECOMMENDATIONS

Given the severity of both the current food deficit and the chronic nature of food insecurity in Nepal, the Mission has developed a number of recommendations and strategies for improving Nepal's overall food security. Key recommendations are highlighted below. The complete list of recommendations and strategies are available in the final report.

POLICY LEVEL

The Mission believes that there is an urgent need for the Government of Nepal to implement agricultural reforms and substantially increase investments in the sector to avert the escalation of food insecurity in Nepal. A new agricultural strategy should be developed with a focus on quick impact interventions to provide immediate peace dividends and relief to food insecure populations, as well as a combination of medium and longer term projects to tackle chronic food insecurity and improve national crop production levels.

QUICK IMPACT INTERVENTIONS

- Extension of WFP's food aid to the most drought and conflict affected populations through food for work strategies that improve community assets and reduce people's vulnerability to shocks
- Increase the utilization and storage capacity for appropriate grain seeds
- Rehabilitation and development of irrigations systems to improve productivity and protect communities from the impacts of local drought and other natural disasters
- Strengthen the capacity of GoN agencies to monitor food security and vulnerability factors, and to develop appropriate responses

MEDIUM TERM INTERVENTIONS

- Develop programmes aimed at increasing knowledge about nutrition through school feeding programmes and mother and child healthcare programmes
- Undertake a comprehensive study on seasonal migration and its value as a coping strategy to food shortages
- Improve the quality and availability of local seed by supporting community seed producers under the DISSPRO programme through technical assistance and matching grants

LONGER TERM INTERVENTIONS

- Expand year-round irrigation infrastructures and provide support to water users associations in order to reduce vulnerability, increase crop density, diversity and crop yields
- Strengthen research in seed sector development with focus on maize, soybean, vegetables and other cash crops based upon agro-ecological zones
- Increase investment in road corridors to facilitate development of markets and cash crops

Crop Situation Updates are produced by WFP Nepal as part of its Food Security Monitoring and Analysis System.

Previous issues of the Crop Situation Update as well as other information products produced by the Food Security Monitoring and Analysis System are available on the UN Nepal Information platform or on the following WFP website: http://vam.wfp.org/country/docs?country=524

For more information please contact the Food Security Monitoring and Analysis Unit
United Nations World Food Programme
Patan Dhoka Road, Lalitpur
PO Box 107
Tel 5542607 ext 2420-5