

The eight mountain districts of Provinces 6 (Karnali) and 7 are some of the most food insecure areas of Nepal, with higher prevalence of poverty and stunting than any other area or the national average. The frequent occurrence of shocks such as the 2015/16 winter drought poses further risks to food insecurity. For more information on the food security situation of these areas, please visit www.neksap.org.np

To track seasonal changes over time, a food security monitoring survey panel was started in November 2016 and repeated in June 2017 and November 2017.

Key points:



Overall food security situation has improved in the mountain districts of Provinces 6 and 7 in the first trimester of 2018, with a decrease of 43.8 and 33.1 percent in households consuming an inadequate diet compared to June 2017 and November 2016 respectively. This figure (23 percent) remains notably higher than the national average (AHS, 2015/16).



The contribution of unskilled daily wage labour and remittances to household income has increased in April 2018 compared to June 2017. However, cereal-based agriculture still remains the primary and dominant source of income. The food security situation is found to be better in households with relatively stable income sources.



Households surveyed in April 2018 faced fewer shocks compared to June 2017 but more than November 2016, using fewer and common coping strategies such as borrowing food or money, consuming less preferred foods and reducing size of meals, and exhibited lower propensity to recover from shocks, mainly in Karnali Province (Province 6).



Markets in the mountain districts in Province 6 (Karnali) and 7 in April 2018 were functioning smoothly in terms of supply, demand and transportation services and food commodity prices showed a downward trend since November 2016.

Survey methodology

The mVAM household survey followed a November 2016 baseline survey in the five mountain districts in Karnali Province and three mountain districts in the Province 7 - see Map 1 - by following the procedures outlined below:

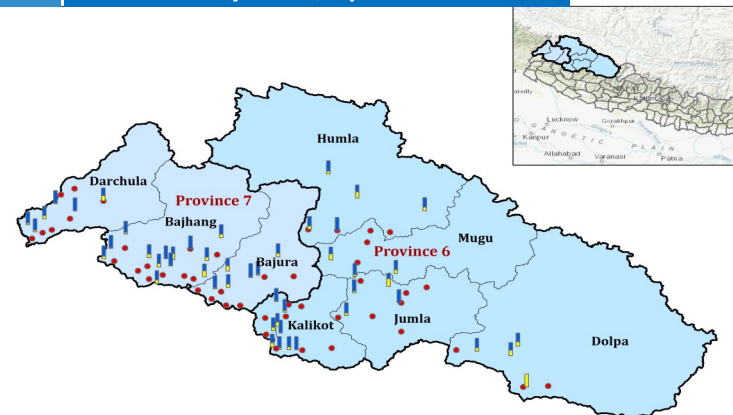
Step 1: Face to face baseline survey using a representative sample of the population:

The baseline survey conducted in November 2016 used a multi-stage stratified cluster design in which 98 primary sampling units (PSUs) were selected at the first stage followed by 15 households interviewed in each PSU at the second stage, for a total of 1,470 households. In this survey, a total of 48 new PSUs were selected to interview and out of 50 repeated PSUs, about 78 percent of sampled households had a phone number and agreed to be contacted via telephone calls in the subsequent survey rounds, while a total of 152 repeated sampled households without telephone number were included in the face to face interview. In addition, 92 traders from markets in the vicinity to the PSUs and the district headquarters were also interviewed.

Step 2: Dual mode **panel** survey (live telephone calls and face to face survey):

Following the baseline survey, trained call operators from a call center made live telephone calls to the panel households with a phone number while field enumerators conducted face to face interviews for the panel households without phones and non-reachable households with phones after sufficient call attempts. A total of 300 households and 34 traders were successfully interviewed in April 2018, fifteen months after the baseline survey in November 2016.

Map 1 | mVAM survey areas, April 2018



Household characteristics



1,429 respondents interviewed



6.3 members per household on average



16.7 percent female headed households



43.7 percent illiterate household heads



Adequacy of food consumption

In the mountains of Provinces 6 (Karnali) and 7, 23 percent of households consumed an inadequate diet with insufficiently diversified food.

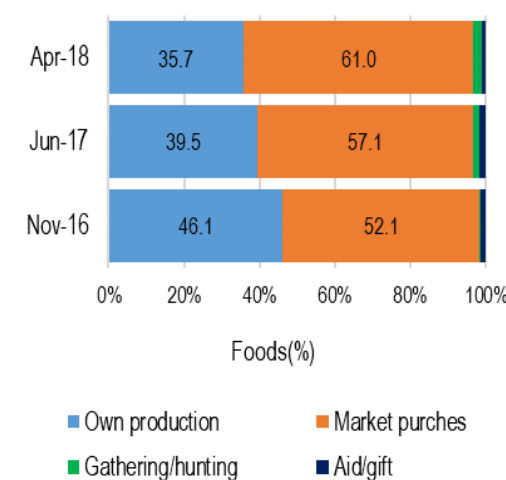
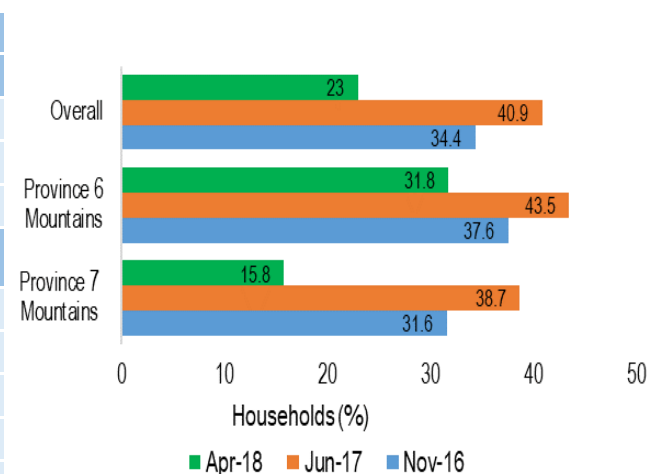
- The average food consumption score (FCS¹) of sampled households in the survey districts was 49.3 in April 2018, around 0.3 and 3 points lower than June 2017 (49.6) and November 2016 (52.1) respectively, indicating a relatively stable household food consumption score. However, the overall household food security situation is found to be better and improved in the mountain of Province 7 in comparison to deteriorating food security situation in Karnali Province due to the depletion of household food stocks, caused by poor harvest of cereal crops, itself a result of insufficient rainfall during the growing and maturity period of crops, a major source of household food consumption.
- The proportion of households with inadequate food consumption (FCS <= 42) was 23 percent in April 2018, a significant drop from 26.9 percent in June 2017 and 15.4 percent in December 2016 (Figure 1), of which 10.4 percent had poor food consumption and 12.6 percent had border line food consumption .
- Female-headed households were found to have a relatively higher proportion of inadequate food consumption (24.1 percent) than male headed households (22.1 percent). This could be due to disparities in access to productive resources.
- Increased household food stock, improved supply and an access to roads in the rural and remote areas were the main contributors to the improved food security situation. Households' food security situation improved in the mountain districts of Province 7 compared to June 2017 and December 2016, while in the Karnali Province, the food security situation was only marginally better than the findings of previous rounds, indicating persistent food insecurity .
- Households consumed food groups such as cereals and oil and fats almost everyday in a 7-day recall period, followed by pulses and vegetables (about 5 days), and milk and sugar and sweets (about 3 days). However, households consumed meat and fish and fruits less than one day a week on average (Table 1). Consumption of most food groups was relatively stable as compared to June 2017, but slightly lower than December 2016. Consumption of market-purchased food commodities was higher in April 2018 than June 2017 and November 2016, indicating an increased access to markets in rural areas and lessened reliance on own production for household consumption (Figure 2).

Table 1 FCS and no. of days food groups consumed

Figure 1 Households with inadequate food consumption

Figure 2 Sources of foods consumed

	Nov-16	Jun-17	Apr-18
Food consumption score			
FW Mountains	53.9	51.6	52.8
MW Mountains	49.9	47.1	45.0
Overall	52.1	49.6	49.3
Number of days consumed in 7 days			
Cereals	7.0	6.9	6.8
Pulses/tubers	5.5	4.7	4.8
Milk	2.5	2.3	2.7
Meat/fish/eggs	1.7	0.6	0.8
Vegetable	3.8	4.4	4.2
Fruits	0.7	0.7	0.5
Oil/fats	6.1	6.4	6.5
Sugar/sweets	4.1	3.7	3.5



1: <https://www.wfp.org/content/technical-guidance-sheet-food-consumption-analysis-calculation-and-use-food-consumption-score-food-s>



Diversity of diet

One fourth of all households in the mountain districts of Provinces 6 (Karnali) and 7 had a less diverse diet, and the number of households with less diverse diets is threefold higher in Karnali Province than in Province 7.

- Out of a total of eight food groups, households on average consumed about five and half food groups based on a seven-day recall; a higher consumption of cereal foods, oil and fats, and pulses was recorded, slightly exceeding the findings of previous surveys (June and December 2017). Higher consumption of food groups (six in a week) was observed in the mountain districts of Province 7 compared to five food groups in the mountain districts of Karnali Province (Province 6).
- The findings show that about 24 percent of households had poor dietary diversity, that is consumed less than five food groups in a week. The proportion of households with poor dietary diversity was down from 27 percent in June 2017 and 25 percent in December 2016. Despite a significant decline in the proportion of households with poor dietary diversity (13.8 percent) in Province 7, about 40 percent of households had poor dietary diversity in the Karnali Province, an increase of 34.6 percent compared to June 2017 and 23.8 percent compared to December 2016 (Figure 3).
- Households with poor dietary diversity consumed less meat/fish/egg, fruits and milk compared to households with acceptable dietary diversity (Table 2). The consumption of staple foods, however, is almost the same (all seven days), whereas the consumption of meat/fish/eggs and fruits is almost negligible (less than one day) for both groups.
- Despite a relatively higher percentage of female headed households with inadequate food consumption, there is no significant difference of dietary diversity between male (23 percent) and female (22.9 percent) headed households, an indication of an importance of dietary diversity in human health regardless of gender and greater awareness of gender equality (Table 3).

Figure 3 Households with poor dietary diversity

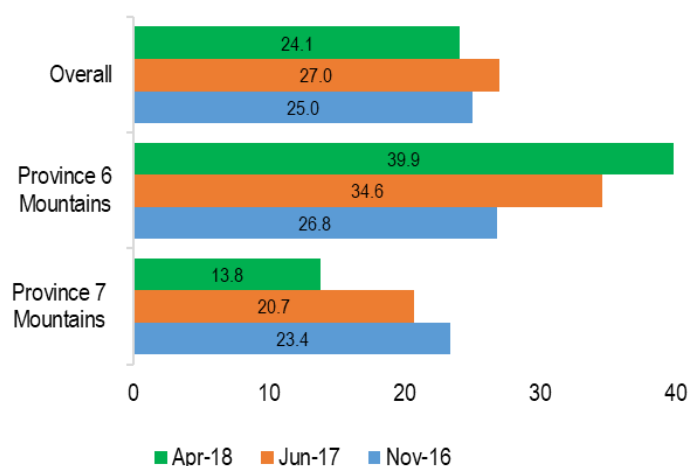


Table 2 Mean number of food groups consumed last week by diet diversity

Food groups	Household with acceptable dietary diversity	Household with poor dietary diversity
Cereals	6.9	6.6
Pulses/Tubers	5.3	3.4
milk and dairy	2.5	0.6
Meat fish	1.0	0.1
Vegetables	4.7	2.6
Fruits	0.7	0.0
Oil Fats	6.7	6.0
Sugar, Honey	4.4	0.5

Table 3 Food consumption by gender of household head

Households (%)	Inadequate consumption	Adequate consumption
Male	22.1	77.9
Female	24.1	75.9
Total	22.4	77.6
	Poor diversity	Acceptable diversity
Male	22.9	77.1
Female	23.0	77.0
Total	22.9	77.1

Vulnerability: shocks and coping strategies

A higher proportion of households were confronted with multiple shocks in April 2018 than November 2016, but this was significantly lower than June 2017. Households adopted various coping strategies to recover, but a greater proportion of them have yet to recover fully from the shocks. A greater proportion of households in the mountain districts of Karnali Province faced shocks than households in Province 7.

- About 42 percent of households in the mountain districts of Provinces 6 (Karnali) and 7 faced multiple shocks in the past six months preceding this survey, a significant drop compared to June 2017, but still higher than November 2016. Moreover, a significant and larger proportion of households faced multiple shocks in the mountain districts of Karnali Province (58.4 percent) compared to mountain districts in Province 7 (28.5 percent). The findings from several rounds of surveys show a consistent difference in shocks between the mountain districts of Karnali Province and Province 7, and indicate a chronic problem that causes persistent food insecurity in the mountain districts of Karnali Province.
- Major shocks faced by those reported households in the survey were mainly disease, illness or accident of family members in the household, crop loss due to hail or drought, lack or loss of employment and loss of livestock (Figure 4). These shocks were mainly due to unpredictable climatic phenomena such as drought and hail that negatively impacted crop production—a main source of household income in the survey area—together with water borne diseases and poor health care infrastructure in these regions.
- Out of the 42 percent of households that faced shocks, about 16 percent completely recovered, 46 percent partially recovered and the remaining 38 percent were unable to recover. This finding indicates a low level of resilience owing to limited income sources and vulnerable livelihoods in the survey area.
- About 27 percent (Table 5) of households reported that they sometimes did not have enough food or money to buy food in the 30 days preceding the survey in April 2018. This is marginally lower than June 2017 (30 percent) and significantly higher than November 2016 (15.9 percent), indicating a seasonal variability in food stock. The findings also show a very high variability between the two strata: about 8 percent of households in the mountain districts of Province 7 reported sometimes not having enough food or money to buy food compared to about 52 percent of households in the Karnali Province.
- A relatively lower proportion of households reported having to adopt coping strategies in April 2018 compared to June 2017, but this was significantly higher than November 2016. The major coping strategy adopted by households in the mountain districts of Provinces 6 (Karnali) and 7 was borrowing money or food from lenders, friends or relatives (24.2 percent), followed by eating less preferred food (9.8 percent) and reducing portion size of meal (6.1 percent).
- Among various coping strategies, borrowing money or food, reducing portion size of meal, eating less preferred food, reducing number of meal and harvesting immature crops are the most common and frequently used coping strategies in the region. A greater proportion of households used coping strategies such as borrowing money or food and harvesting immature crops and sale of productive assets in the mountain districts of Karnali Province compared to those in the Province 7.

Table 4 Coping strategies adopted by households

Households (%)	Apr-18	Jun-17	Nov-16
Borrow money food	24.2	26.5	14.6
Sell more animals than usual	1.8	3.4	1.5
Sold household assets	0.7	0.6	0.6
Sell productive assets	0.1	0.4	0.2
Withdraw children from school	0.3	1.2	0.6
Harvest immature crops	6.0	4.0	2.8
Sell last female animals	2.6	1.7	1.0
Reduce portion size of meal	8.3	7.7	6.1
Reduce number of meal	7.3	6.7	4.6
Eat less preferred food	11.9	12.2	9.8
No coping strategy adopted	72.9	70.0	84.1

Figure 4 Types of shocks faced by households

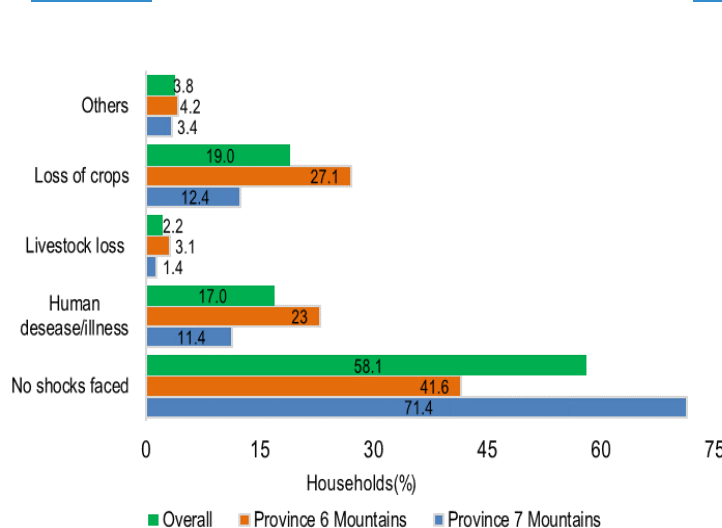


Table 5 Households without food or money to buy food

Households (%)	Nov-16	Jun-17	Apr-18
Province 6 Mountains	9.0	21.4	50.6
Province 7 Mountains	23.9	40.1	8.1
Overall	15.9	30.0	27.1



Household livelihoods

Despite cereal-based agriculture remaining the major source of livelihoods, the contribution of unskilled daily wage labour and remittances to household income increased in April 2018 compared to June 2017. Cereal-based agriculture remained a more significant source of income in Karnali Province than in Province 7.

- The findings show that a majority of households (69.9 percent) reported cereal crop production as a source of income in the mountain districts of Provinces 6 (Karnali) and 7 in the four months preceding the April 2018 survey, followed by unskilled wage labour activities (37.0 percent), remittances (29.1 percent) and livestock farming (36.8 percent). Compared to the mountain districts of Province 7, a greater proportion of households in the mountain districts of Karnali Province were engaged in unskilled labour activities and livestock farming, including agriculture labour. Remittances were more common among households in Province 7 than in Karnali Province (Table 6).
- Overall, in addition to agriculture, greater proportions of households in the mountain districts of Province 7 were found to have adopted more sustainable incomes such as remittances, salaries from employment and trade and shopkeeping compared to the mountain districts in Karnali Province. This result is also consistent with food security outcomes showing that households engaged in sustainable livelihoods have better food security than those with unsustainable livelihoods (Table 6).
- About 40 percent of households have at least one migrant member, and this proportion is greater in the mountain districts of Province 7 (49 percent) compared to mountain districts in Karnali Province (28.7 percent). Moreover, a higher percentage of migrants went for employment in Province 7 (87.1 percent) compared to 69.8 percent in the Karnali mountains. It is also interesting to note that India is the preferred destination for migrant workers in Province 7, whereas migration within Nepal is higher for the Karnali mountains (69.8 percent). No significant change in the pattern of migration was observed since the baseline survey in November 2016 (Figure 5).
- About 4.5 percent of households received external assistance such as humanitarian and development assistance; a significantly higher proportion of households received assistance in the mountain districts of Karnali (8.9 percent) than in the mountains of Province 7 (0.7 percent).

Table 6 Sources of household income (%)

Type of household livelihoods	Overall	Province 6 mountains	Province 7 mountains
Agriculture (mostly cereal production)	67.9	81.8	56.6
Other unskilled labour (porter, stone quarry worker etc)	37.0	45.7	30.1
Remittance	29.1	20.4	36.2
Livestock farming	26.8	29.6	24.6
Social benefit schemes	14.1	14.0	14.1
Unskilled agriculture wage labour)	13.4	20.1	8.0
Salaried employment (Govt/private companies/NGO/INGO)	12.2	9.8	14.2
Skilled labour (masonry, carpenter)	10.4	12.1	9.0
Agriculture (cash/high value crops)	9.9	13.9	6.7
Trade/shop keeping	9.1	7.7	10.3
Sale of NTFP	7.4	12.9	2.8
Humanitarian/Development assistance	4.4	8.9	0.7
Others	2.9	2.5	3.3

Figure 5 Migration destination as percentage of households

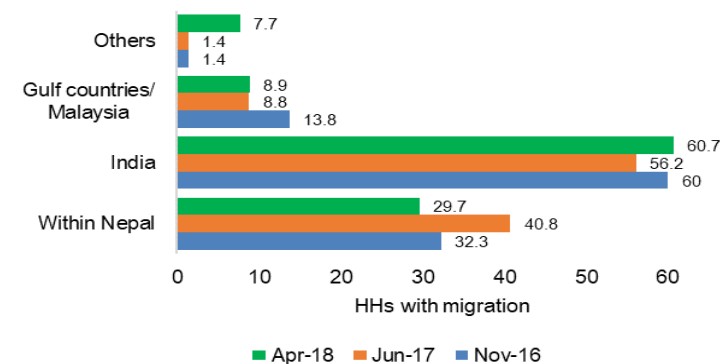


Table 7 Purpose of migration (%)

Province	Employment	Non employment
Province 6 mountains	69.8	30.2
Province 7 mountains	87.0	13.0
Overall	81.5	18.5

Market situation

Markets in the mountain districts of Provinces 6 (Karnali) and 7 are operating normally with food commodity prices showing a declining trend.

- More than 80 percent of traders reported that the supply of food and non-food items had improved or was stable in April 2018, while about 83 percent of them reported that demand was stable or improved. Likewise, about 85 percent of traders reported an improvement or stable transportation services in the mountains of Provinces 6 (Karnali) and 7 (Figure 6).
- Average food commodity prices were lower in districts with better road access and higher in those districts without or with limited road access. For example, the retail price of coarse rice was almost three times higher in Humla (117.2 NPR/kg) than in Bajhang (40.3 NPR/kg) in April 2018. Likewise, the retail price of wheat flour was nearly three times higher in Humla (116.5 NPR/kg) than in Bajhang (43.2 NPR/kg). Similar price variations due to type of road/ road access was also observed within districts.
- The average retail price of most food commodities in April 2018 was mostly lower than in June 2017 and November 2016 (Table 8), driven by increased access to roads that improved supplies with relatively lower transportation costs.
- Overall, more than 80 percent of traders reported that markets had sufficient stock of food commodities to meet consumer demand. The availability of food stocks is found to be higher in the secondary markets than the primary markets (located at the district headquarters) (Table 8).



For further information

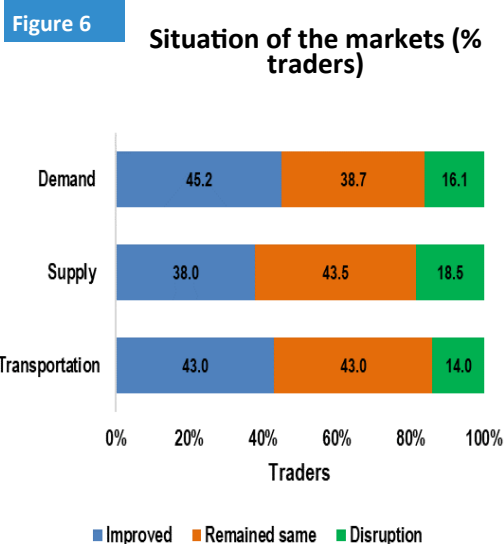
Mr. Ram Krishna Regmi , MoAD rkregmi@yahoo.com
Mr. Moctar Aboubacar, WFP moctar.aboubacar@wfp.org
Mr. Sridhar Thapa, WFP sridhar.thapa@wfp.org

Ministry of Agriculture, Land Management and Cooperatives
 Singha Durbar, Kathmandu, Nepal.

United Nations World Food Programme,
 Patandhoka Road, Lalitpur, Nepal
 Tel: +977 1 5260607,

NeKSAP resource
 Website: <http://www.neksap.org.np>

mVAM resources:
 Website: http://vam.wfp.org/sites/mvam_monitoring/
 Blog: mvam.org
 Toolkit: <http://resources.vam.wfp.org/mVAM>



Market type	Stock is sufficient	Stock is insufficient
Primary	74.3	25.7
Secondary	84.5	15.5
Total	80.6	19.4

Table 8: Retail prices of food commodities (NPR per kg/ltr)

	District	Coarse rice	Wheat flour Atta	Soy-bean oil	Broken lentil	Potato	Chicken meat
Province 6 mountain	Dolpa	78.5	96.3	181.3	242.5	43.0	508.3
	Humla	117.3	116.5	241.1	260.0	51.3	500.0
	Jumla	52.7	49.2	151.0	137.5	23.1	463.0
	Kalikot	45.2	48.1	154.8	181.8	38.7	409.5
	Mugu	54.7	50.0	156.3	136.0	27.4	491.7
Province 7 mountain	Bajhang	40.3	43.2	150.6	160.8	33.3	425.0
	Bajura	41.6	43.9	169.5	165.5	34.0	447.5
	Darchula	43.6	45.2	161.0	140.0	30.5	420.0
2018 April	Overall	55.2	57.6	167.6	173.5	34.8	443.8
2017 June	Overall	57.8	64.0	181.7	187.9	40.0	481.0
Price change in April 2018 against June 2017 (%)	Overall	-4.5	-10.1	-7.8	-7.6	-13.1	-7.7
2016 December	Overall	55.3	58.4	175.9	180.2	38.8	422.7
Price change in April 2018 against Dec 2016 (%)	Overall	-0.2	-1.4	-4.7	-3.7	-10.4	4.9

Acknowledgements: This bulletin has been produced with the technical and financial support of the following partners in Nepal and abroad:

