

The eight districts of the mid- and far-western mountains of Nepal are some of the most food insecure areas in the country. Poverty and stunting are much higher there than in other areas and the national average. Recurrence of acute shocks—most recently the 2015/16 winter drought—further erodes resilience. For more information on the food security situation of these areas, please visit the website www.neksap.org.np

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

Key points:

-  41 percent of households consumed an inadequate diet in the mid- and far-western mountains in June 2017 compared to 34.4 percent in November 2016. This is significantly higher than the national average of 28 percent (WFP, 2015)
-  30 percent of households reported that they sometimes did not have enough food or money to buy food in the 30 days before the survey in June 2017, an increase from 16 percent in November 2016. Borrowing money or food from lenders, friends and relatives was a common coping strategy.
-  More than half of the households (54.6 percent) faced different shocks in the 6 months preceding the survey, which is significantly higher than November 2016 survey when it was 34 percent. The majority of households (52.8 percent) that faced a shock had only partially recovered.
-  Markets in the mid- and far-western mountains in June 2017 were operating normally in terms of supply, demand and transportation services and the prices of the food commodities have increased marginally since November 2016.

Survey methodology

The mVAM household survey was designed to produce representative estimates for two strata: the mid-western mountains (five Karnali districts) and the far-western mountains (three districts) - see Map 1 - by following the procedures outlined below:

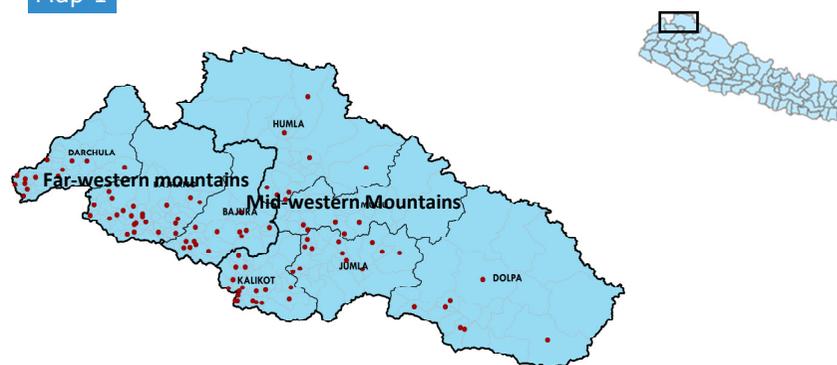
Step 1: Face to face baseline survey using a representative sample of the population

The baseline survey conducted in November 2016 followed 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. 60 percent of sampled households had a phone number and agreed to be contacted via telephone calls in the subsequent survey rounds. In addition, 96 traders from markets in close proximity to the sampled households 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 center operators made live telephone calls to the panel households with a phone number and field enumerators conducted face to face interviews for the panel households without phones. A total of 1,395 households and 89 traders were successfully interviewed in June 2017, six months after the baseline survey in November 2016.

Map 1 mVAM survey areas, June 2017



Household characteristics

-  1395 respondents interviewed
-  6.2 members per household on average
-  17% female headed households
-  46% illiterate household heads



Adequacy of food consumption

41 percent of households in the mid- and far-western mountains consumed an inadequate diet, lacking in quantity and diversity

- ◆ The food consumption score (FCS), a composite indicator that measures food frequency, dietary diversity and nutritional importance of food groups¹, of sampled households in the mid- and far-western mountains was 49.6 in June 2017, around 3 point lower than November 2016 (52.1) **signalling the beginning of agricultural lean agriculture season for these areas**. It is important to note that the household food consumption will continue to decline as the peak of lean season approaches (august). Even though this value represents an acceptable consumption, a significant proportion of households still consume inadequate diet (see bullet point below). Additionally, the FCS this round is significantly lower ($p < 0.001$) than the national average of 58.3 (WFP, 2015), evidence that households in the mid- and far-western mountains are a food insecure and vulnerable population.
- ◆ Based on the FCS, the proportion of households consuming an inadequate diet ($FCS \leq 42$) was 41 percent in June 2017, about seven percentage points higher than in the November 2016 baseline (34.4 percent). This difference is statistically significant ($p < 0.001$). This is also significantly higher than the national average of 28.1 percent (WFP, 2015). A greater proportion of households in the mid-western mountains (43.5 percent) have consumed an inadequate diet than in the far-western mountains (38.7 percent) (Figure 1). Additionally, the proportion of households consuming inadequate diet from Annual Household Survey (AHS) 2015/16 from Central Bureau of Statistics, Nepal is 16 percent. However, the AHS methodology to compute FCS is slightly different than mVAM and hence the findings are not directly comparable.
- ◆ Households consumed cereals and oils/fats almost everyday during the last seven days before the survey in June 2017. Fruits and meats/fish/eggs, however, were consumed about one day a week (Table 1). Consumption of pulses/tubers and meat/fish/eggs declined in June 2017 compared to the baseline in November 2016. **More foods were purchased from the markets in June 2017 than in November 2016**. This highlights the importance of market purchases, especially during the traditional lean season periods (Figure 2).

Table 1 FCS and no. of days food groups consumed

	Nov 2016	June 2017
Food consumption score		
FW Mountains	53.9	51.6
MW Mountains	49.9	47.1
Overall	52.1	49.6
No. of days consumed in 7 days		
Cereals	7.0	6.9
Pulses/tubers	5.5	4.7
Milk	2.5	2.3
Meat/fish/eggs	1.7	0.6
Vegetables	3.8	4.4
Fruits	0.7	0.7
Oils/fats	6.1	6.4
Sugar/sweets	4.1	3.7

Figure 1 Households with inadequate food consumption

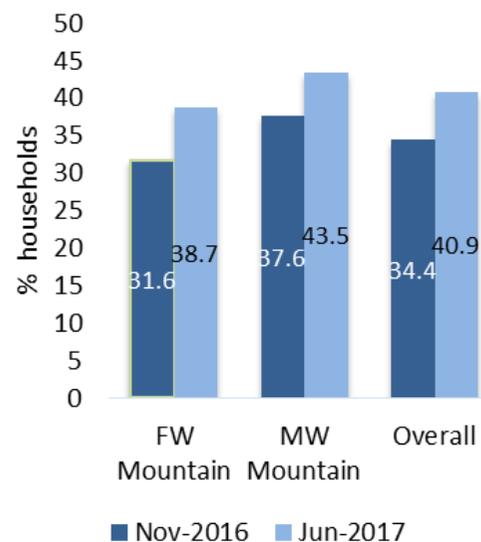
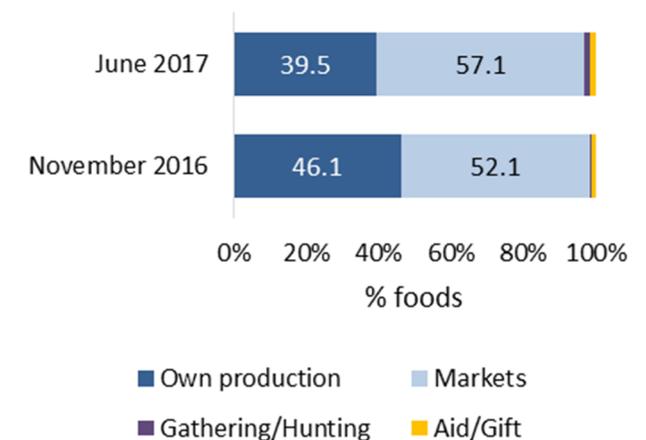


Figure 2 Sources of foods consumed



Note: The CARI indicator for measuring food security has not been calculated this round as efforts are currently ongoing to make it suitable for mVAM survey. For more information on this indicator, please visit: <https://www.wfp.org/content/consolidated-approach-reporting-indicators-food-security-cari-guidelines>

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



Diversity of diet

Greater proportion of households in the mid-western mountains consumed a less diverse diet compared to the far-western mountains

- ◆ Households, on average, have consumed five food groups out of a total of eight food groups in the seven days preceding the survey in June 2017. Households in the far-western mountains have consumed about six food groups compared to five food groups in the mid-western mountains.
- ◆ Based on the number of food groups consumed, 27 percent of households are classified as having poor dietary diversity in June 2017. The households consuming less than five food groups are considered to have poor dietary diversity. In November 2016, 25 percent had poor dietary diversity. There is a significant difference ($p < 0.001$) in the proportion of households with poor dietary diversity in the mid- and far-western mountains (Figure 3).
- ◆ Households with poor dietary diversity consumed less pulses/tubers, milk and milk products, vegetables and sugar/sweets compared to the 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.
- ◆ A greater proportion of female headed households had inadequate consumption (46 percent) compared to the male headed households (40 percent) in June, although this difference is not statistically significant. The proportion of female headed households consuming low diversity foods (32.6 percent) was higher than for male headed households (26 percent) (Table 3). This difference is statistically significant ($p < 0.05$).
- ◆ **In general, a greater proportion of households in the mid-western region consumed diet lacking in quantity and diversity than households in the far-western mountains.** The difference between these two regions occur both in terms of availability and economic access to food. According to the crop situation report released by the Government of Nepal, there were more severely food deficit areas in the mid-western mountains compared to far-western mountains². In addition, more diverse and high return income opportunities such as work related migration, skilled labour activities, livestock farming and high value crop production are available to the households of far-western mountains than the mid-western mountain households which are mostly reliant on unskilled wage labour activities as secondary income sources (page 4, table 4).

Figure 3 Households with poor dietary diversity

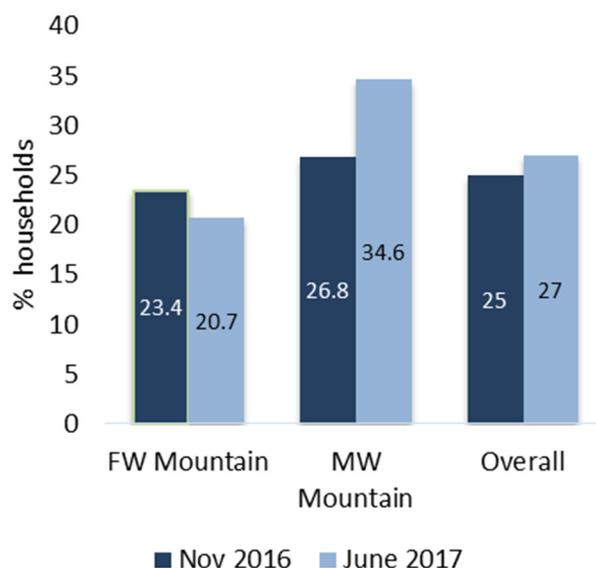


Table 2 Mean number of food groups consumed last week by diet diversity

Food Groups	HHs with poor dietary diversity	HHs with acceptable dietary diversity
Cereals	6.8	6.9
Pulses/tubers	3.6	5.1
Milk/milk prod.	0.3	3.0
Meat/fish/eggs	0.1	0.8
Vegetables	3.1	4.9
Fruits	0.0	0.9
Oil/fats	5.9	6.6
Sugar	0.7	4.8

Table 3 Food consumption by gender of household head

% households	Inadequate consumption	Adequate consumption
Male	40.0	60.0
Female	46.0	54.0
Total	40.9	59.1
	Poor diversity	Acceptable diversity
Male	26.0	74.0
Female	32.6	67.4
Total	27.1	72.9

Vulnerability: shocks and coping strategies

Shocks and coping strategies adopted varied geographically with households in the mid-western mountains showing higher vulnerability

- ◆ More than half of households (54.6 percent) in the mid- and far-western mountains faced shocks in the six months preceding the survey in June 2017, which is significantly higher ($p < 0.001$) than in November 2016 when it was 34 percent. Additionally, a greater proportion of households in the mid-western mountains (59.5 percent) faced shocks compared to those in the far-western mountains (50.5 percent). Of the households that faced shocks, family member illness and loss of livestock were the most reported shocks in this round of the survey (Figure 4), mostly caused by the pre-monsoon weather resulting in the increase in the water borne diseases and poor health care infrastructure in these regions. Similarly, loss of livestock was attributed to livestock diseases and lack of vaccines for treatment.
- ◆ The baseline survey conducted in November 2016 revealed that 12 percent of households in mid-western mountains openly defecate compared to 6 percent households in the far-western mountains. Also, less proportion of households in the mid-western mountains have access to improved drinking water sources compared to far-western mountains. This has likely resulted in more households in mid-western mountains facing health related shocks as mentioned in the bullet point above.
- ◆ A fifth of households (20 percent) that faced shocks completely recovered from them, whereas 53.8 percent only partially recovered, indicating a low level of resilience among households living in the mid- and far-western mountains.
- ◆ **Thirty 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 June 2017.** This is significantly higher ($p < 0.001$) than in November 2016 when it was 15.9 percent. This indicator showed a high degree of variability between the two strata: 40.1 percent of households in the far-western mountains reported sometimes not having enough food or money to buy food compared to 21.4 percent of households in the mid-western mountains.
- ◆ A greater proportion of households reported having to adopt coping strategies during June 2017 compared to November 2016. The main coping strategy used by households in the mid- and far-western mountains was borrowing money or food from lenders, friends or relatives. This was reported by 26.5 percent of households. Households also harvested immature winter crops to cope with the lack of food or money to buy food.
- ◆ Almost all of the coping strategies have been adopted by a greater proportion of households in the mid-western mountains than those in the far-western mountains. The difference in the coping strategies adopted between the two strata is most prominent in borrowing money/food.

Table 4 Coping strategies adopted by households

% of households	June 2017	November 2016
Borrow money/food	26.5	14.6
Sell more animals than usual	3.4	1.5
Sold household assets	0.6	0.6
Sell productive assets	0.4	0.2
Withdraw children from	1.2	0.6
Harvest immature crops	4.0	2.8
Sell last female animals	1.7	1.0
Reduce portion size	7.7	6.1
Reduce number of meals	6.7	4.6
Eat less preferred food	12.2	9.8
No coping strategy adopted	70.0	84.1

Figure 4 Types of shocks faced by households

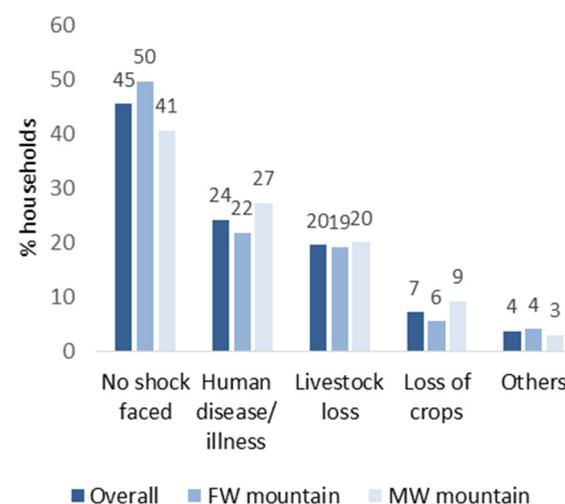


Table 5 Households without food or money to buy food

% of households	November 2016	June 2017
MW Mountains	23.9	40.1
FW Mountains	9.0	21.4
Overall	15.9	30.0



Household livelihoods

Cereal production remains an important income source and almost half of the households in far-western mountains have a migrant member

- ◆ A majority of households (74 percent) reported cereal crop production as a source of income in the mid- and far-western mountains in the four months preceding the survey in June 2017. This was followed by unskilled wage labour activities (32.7 percent) and remittances (25.5 percent). A greater proportion of households in mid-western mountains were engaged in unskilled labour activities, including agriculture labour, than in the far-western mountains. Remittances were more common among households in the far-western mountains than in the mid-western mountains (Table 6).
- ◆ In general, the secondary livelihood strategies, apart from agriculture, adopted by greater proportion of households in far-western mountains were found to be more sustainable such as skilled labour work, remittance and livestock farming compared to mid-western mountain households. This is also reflected in the food security outcomes of the households where far-western mountain households fared better than the mid-western mountain households.
- ◆ **Almost half of households (43.5 percent) have at least one migrant member.** 49.3 percent of households in the far-western mountains have a migrant compared to 36.7 percent of those in the mid-western mountains. This difference is statistically significant ($p < 0.001$). Seasonal work related migration provides the households with an additional source of income apart from agriculture production and has now become an important income source for the households in these areas.
- ◆ Given the cheap cost of migration and geographic proximity, **India has remained the preferred migration destination.** No significant change in the pattern of migration was observed since the baseline survey in November 2016 (Figure 5). Of those households with a migrant member, nearly three-fourths (72.7 percent) reported that at least one of their members had migrated for employment purposes. There is a significant difference ($p < 0.001$) in the purpose of migration between households in the mid- and far-western mountains (Table 7).

Table 6 Sources of income as % of households

% households	Overall	FW Mountains	MW Mountains
Agriculture (mostly cereal production)	74.1%	71.9%	76.7%
Other unskilled labour (porter, stone worker, etc.)	32.7%	26.7%	39.9%
Remittances	25.5%	32.7%	17.1%
Livestock farming	23.8%	28.0%	18.8%
Social benefit schemes	16.8%	17.3%	16.4%
Salaried employment (Government/private/NGO)	14.0%	15.6%	12.2%
Agriculture wage labour (unskilled)	12.9%	7.4%	19.4%
Skilled labour (masonry, carpentry, etc)	9.7%	12.4%	6.5%
Trade/shop keeping	9.1%	9.8%	8.3%
Sale of non-timber forest products (NTFP)	8.1%	5.8%	10.9%
Agriculture (mostly cash/high value crops)	5.4%	6.9%	3.6%
Humanitarian/development assistance	3.3%	3.6%	3.0%
Other	3.3%	2.9%	3.8%

Figure 5 Migration destination as % of households

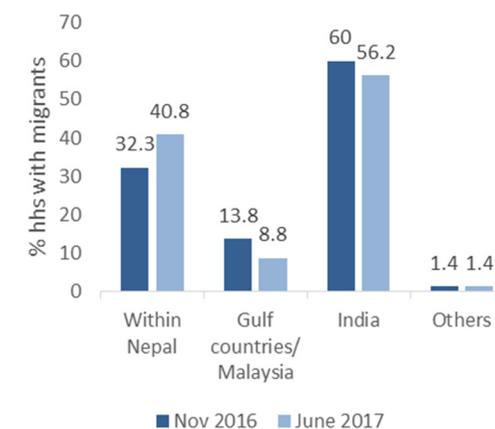


Table 7 Purpose of migration as % hhs with migrants

	Employment	Other reasons
FW Mountain	80.9%	19.1%
MW Mountain	59.7%	40.3%
Overall	72.7%	27.3%

Market situation

Markets in the mid- and far-western mountains are operating normally and the prices of the food commodities have remained stable

- ◆ Most traders (70 percent) reported that the supply of food and non-food items was stable in June, while about half (52.5 percent) reported that demand was stable. Likewise, about 65 percent of traders reported no changes in the transportation of goods (Figure 6).
- ◆ Average food commodity prices were lower in the districts with better road access and higher in those districts without. For example, the retail price of coarse rice was almost three times higher in Humla (115.2 NPR/kg) compared to Darchula (35.3 NPR/kg) in June. Likewise, the retail price of wheat flour was almost three times higher in Dolpa (114.4 NPR/kg) and Humla (113.3 NPR/kg) as compared to Darchula (33.8 NPR/kg) and Bajhang (43.1 NPR/kg).
- ◆ The average retail price of most food commodities in June 2017 were slightly higher than in November 2016 (Table 8) driven by increased demand as the lean season begins.
- ◆ Overall, two-thirds of traders (65.2 percent) reported that markets had sufficient stocks to fulfil consumer demand. There were no major differences in the availability of food stocks between the primary markets (located at the district headquarters) and the secondary markets (Table 9).



For further information

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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>

Figure 6 Situation of the markets (% traders)

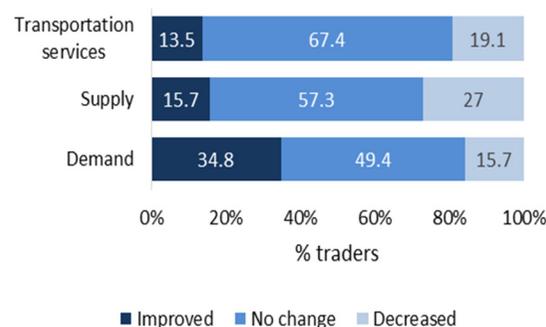


Table 8 Retail prices of food commodities (NPR per kg/ltr)

	District	Coars e rice	Whea t flour	Soy- bean oil	Bro- ken lentil	Pota- to	Chick- en meat
Far-west Mountains	Bajhang	38.9	43.1	161.0	181.0	31.4	425.6
	Bajura	40.3	48.5	170.0	182.7	37.3	458.0
	Darchula	40.3	45.0	188.6	153.3	31.4	395.0
Mid-west Mountains	Dolpa	110.6	114.4	229.0	296.7	85.8	564.3
	Humla	115.2	127.5	241.1	261.7	53.3	800.0
	Jumla	46.9	47.6	145.0	160.0	26.7	463.3
	Kalikot	47.1	51.3	163.8	162.5	37.2	422.2
	Mugu	56.5	61.5	200.0	150.0	25.0	500.0
	Avg price- Jun17	Overall	57.8	64.0	181.7	187.9	40.0
Avg price- Nov16	Overall	55.3	58.4	175.9	180.2	38.8	422.7
% Increase	Overall	4.6%	9.5%	3.3%	4.3%	3.2%	13.8%

Table 9 Market food availability (% traders)

Market type	Stock is sufficient	Stock is insufficient
Primary	66.7%	33.3%
Secondary	64.5%	34.5%
Total	65.2%	34.8%

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