

# Nepal

## mVAM Food Security Monitoring Survey



Overall food consumption levels remained stable, improving in Karnali and Sudurpaschim Mountain Districts compared to January 2019.



More than 85 percent of households depend on cereal-based production as their main livelihood.



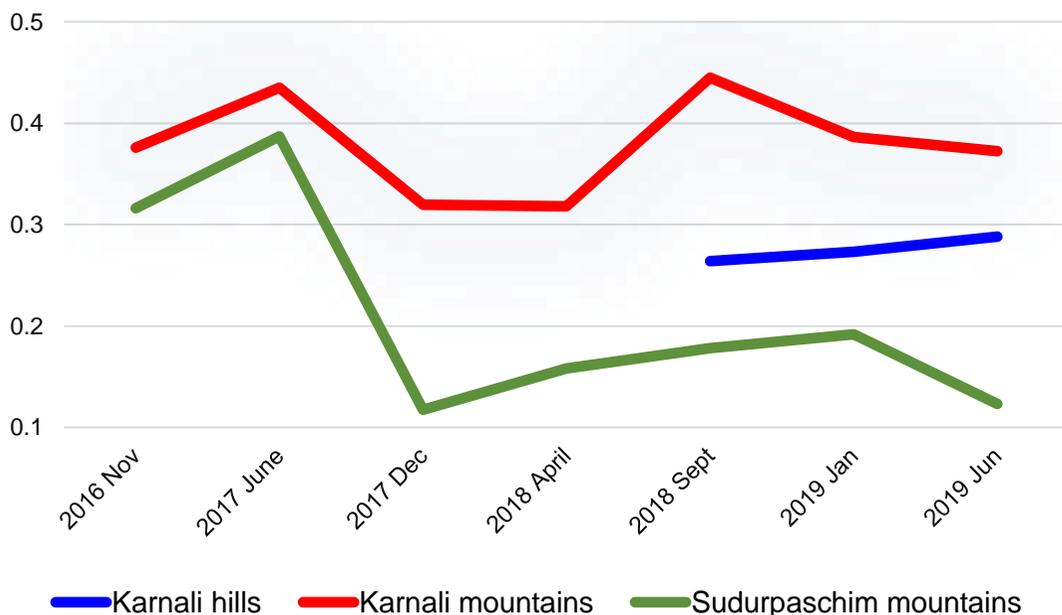
More than one third of all households reported recent shocks, with only 8 percent reporting having fully recovered.



Markets functioned relatively smoothly in most surveyed area in terms of price, supply, demand and transportation services, but some transportation service obstructions were reported in markets with no access to paved roads.



**Figure 1: Trend of household with inadequate food consumption (%)**



### Survey Methodology

The mVAM household survey conducted through telephone in June 2019 follows a panel design using a multi-stage stratified cluster sample, covering three strata—Karnali hills and mountains, and Sudurpaschim mountains. This is the sixth round, following a September 2018 round and November 2016 baseline survey.

### Household characteristics

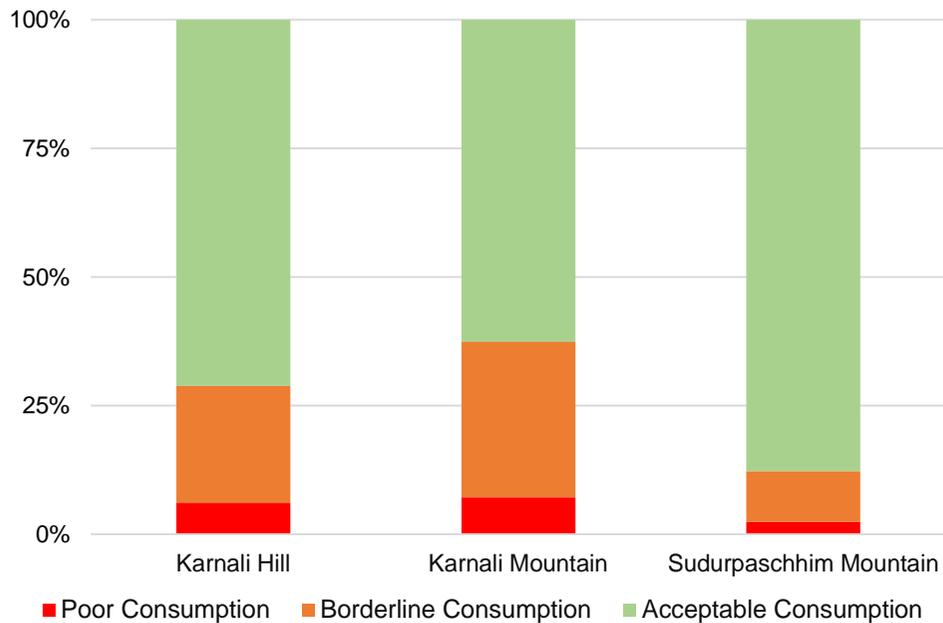
- 1300 respondents interviewed
- 6 members per household on average
- 31 percent of households are female-headed
- 34 percent of heads of household are illiterate

Photo credit: WFP Nepal

# Food Security

28 percent of households had inadequate food consumption over the period. Food security indicators in Sudurpaschim Districts have significantly improved, in contrast to Karnali's hill and mountain areas.

**Figure 2: Household with inadequate food consumption (%)**



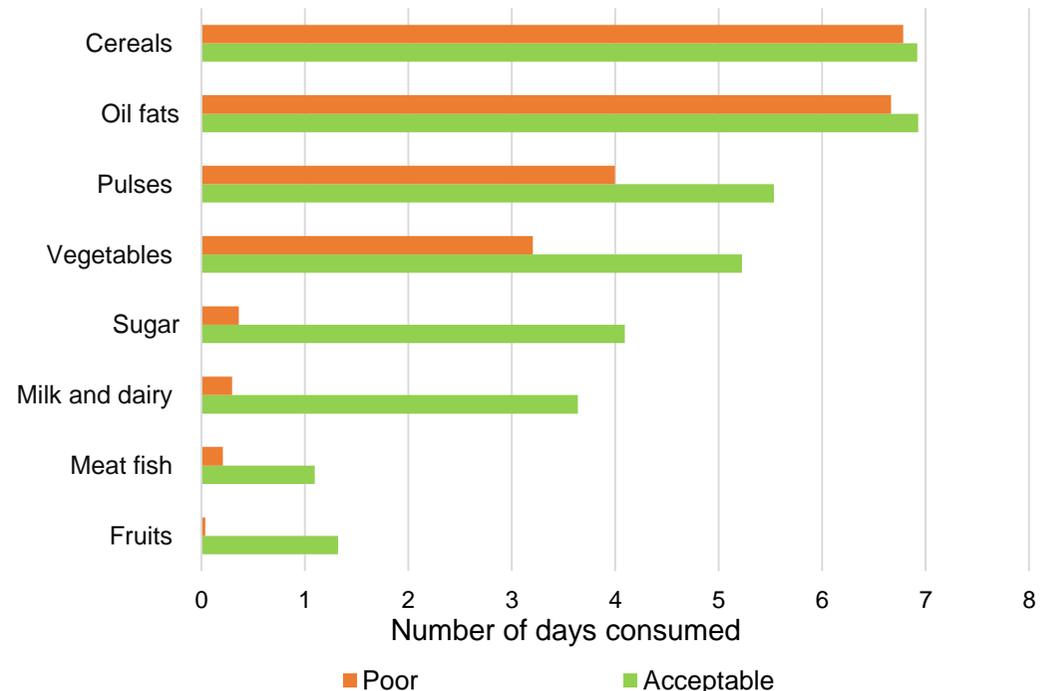
On average, households normally consumed 6 out of 8 food groups (Figure 3) in a week. However, about 19 percent of households had poor dietary diversity, almost double the January 2019 rate. Karnali Mountain Districts were seriously affected, with over 1 in 4 households having poor dietary diversity, followed by Karnali Hill Districts with over 1 in 5 households.

Households with an insufficiently diversified diet were found to have almost negligible consumption of high-nutrient foods such as meat and fish, milk and dairy products and fruit, based on a recall of the past 7 days. Seasonality, low levels of education and remoteness seem to be highly correlated with poor dietary diversity, including household's poor economic access to foods.

Almost three in ten households had insufficient food consumption overall, with a sharp upward divergence in Karnali Mountains (at 37%) and Hills (at 29%) compared to Sudurpaschim Mountains (at 12%). About 6 percent of households had poor food consumption, while households with borderline food consumption increased (at 22%) compared to January 2019, the rate was much higher in Karnali Mountains (Figure 2), the most food insecure region of Nepal.

Food insecurity as measured by the food consumption score seems to be chronic in Karnali mountains as compared to Karnali Hills and Sudurpaschim Mountains perhaps due to rainfed low productive land and remoteness, together with limited employment opportunities in off-farm sectors that constrain access to foods.

**Figure 3: Average number of food groups consumed over 7-day recall period, by diet diversity (DDS) outcome**



# Livelihoods, shocks and coping

More than 85 percent of surveyed households reported cereal-based agriculture as their primary source of income. More than one-third of households reported experiencing shocks in the past 6 months.

**Table 1: Primary sources of household income (combined %, top 5 choices)**

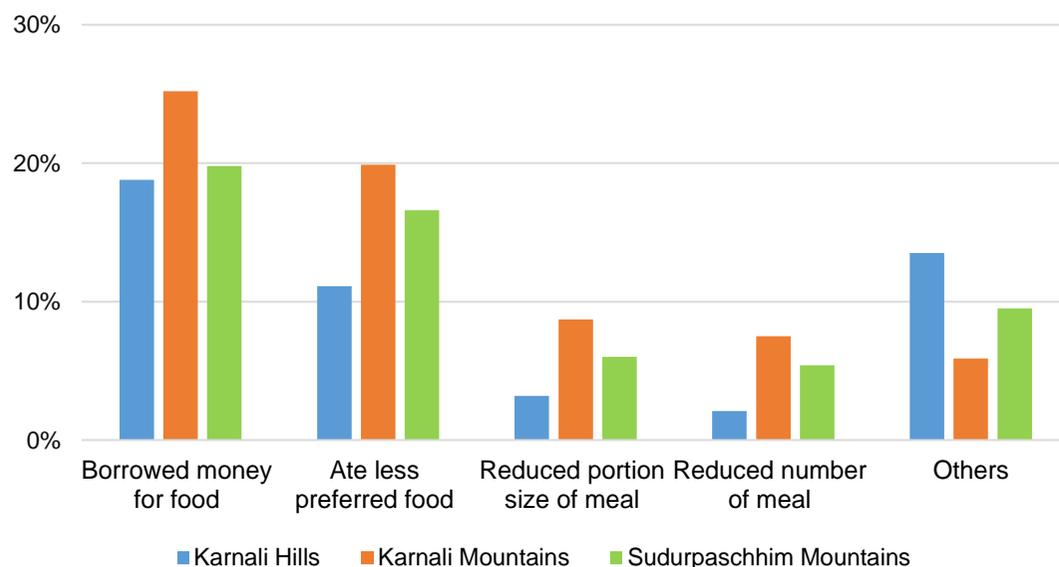
	K- Hills	K-Mountains	S-Mountains
Agri-cereals	80%	93%	89%
Agri-cash crops	28%	27%	27%
Livestock farming	40%	34%	26%
Agri wage labour	10%	4%	13%
Other unskilled labour	11%	39%	30%
Skilled labour	5%	8%	5%
Remittance	19%	14%	27%
Salaries	17%	18%	20%
Trade & business	12%	12%	11%
Sale of NTFP	0%	5%	1%
Social benefits	12%	19%	22%

Cereal-based agriculture was among the top the primary livelihoods (with 87 percent of households identifying it as its top 5 livelihood sources), followed by livestock farming (34%) and cash crops (27%). Subsistence and semi-subsistence livelihood options are more prevalent in Karnali Mountains, while diversified livelihoods are relatively found in Karnali Hills, where employment and other business opportunities are higher with relatively better road networks and market access (Table 1). Despite the dominance of cereal-based agricultural livelihoods, the contribution of salaries, wage labour, remittances and business is becoming prominent particularly in urban and semi-urban areas.

Overall, more than one third of households reported facing some form of shock in the past 6 months, with this number climbing up to 42 percent in Karnali Mountains, followed by Karnali Hills (36%). Overall the most common shocks were those of human diseases, illness and death in the household (76%), followed by crop loss (10%). More households in Sudurpaschim Mountains reported crop loss (20%), mainly hailstones, flood and landslides, which caused significant crop damage in the region in this period.

Of the 35 percent of households reporting experiencing shocks, only 8 percent of them reported having recovered fully, and 60 percent partially. This low level of recovery seems to be associated with irreversible shocks such as death and chronic illness of household members, together with low resilience and less-diversified livelihood strategies. Major coping strategies adopted by the households were: borrowing money and eating less preferred food, including reducing meal portions mainly in Karnali Mountains.

**Figure 4: Coping strategies employed**



# Markets and prices

Most markets monitored in Karnali and mountain districts of Sudurpaschim provinces are operating normally and showing seasonal fluctuations with most food retail prices on an upward trend compared to January 2019.

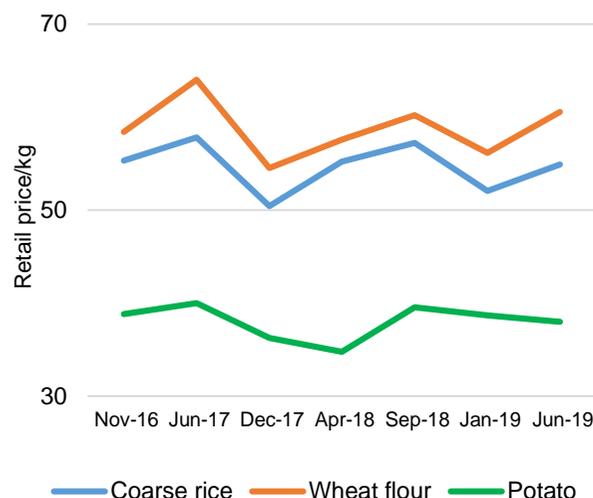
Average retail prices of most food commodities are generally lower in the Hills and Sudurpaschmi Mountains due to access to better road networks that reduce transportation costs. In June 2019, average retail prices of most monitored food commodities were 5 to 30 percent higher in Karnali Mountains compared to Karnali Hills and Sudurpaschim Mountains. For example, the price of coarse rice in Karnali Mountains was 26 and 30 percent higher than Sudurpaschim Mountains and Karnali Hills respectively (Table 2).

The overall price trend of food commodities was relatively stable with low fluctuations. This could be due to increased access to road networks and stable transportation services (Figures 5 and 6). However, retail prices were generally high during lean periods (June – September) and relatively low during harvest seasons (November - February). This trend holds for June 2019.

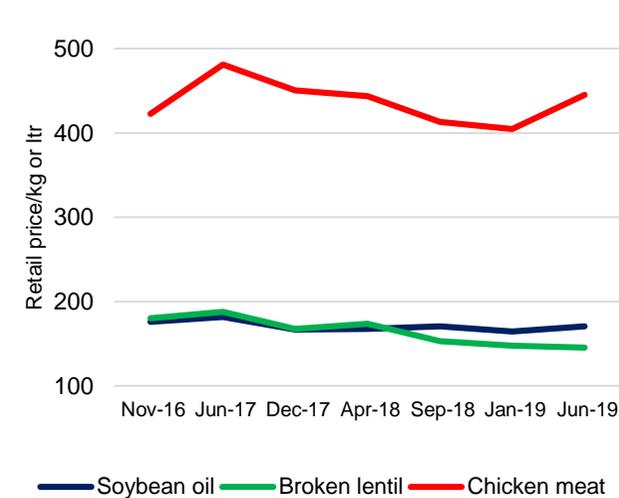
Overall, about 51 percent of traders in the survey area reported that commodities were sufficiently available in the markets, while the rest of markets had insufficient availability of food commodities (Figure 7). Markets with relatively better access to paved roads and supply chains had a better reported sufficiency of food commodities, such as Karnali Hills compared to Karnali and Sudurpaschim Mountains.

Most traders reported that the overall market situation was stable or remained the same for demand (53%), supply (55%) and transportation services (54%), while 54 percent reported a high market demand and 34 percent a high supply (Figure 8).

**Figure 5: Price trend of cereal foods**



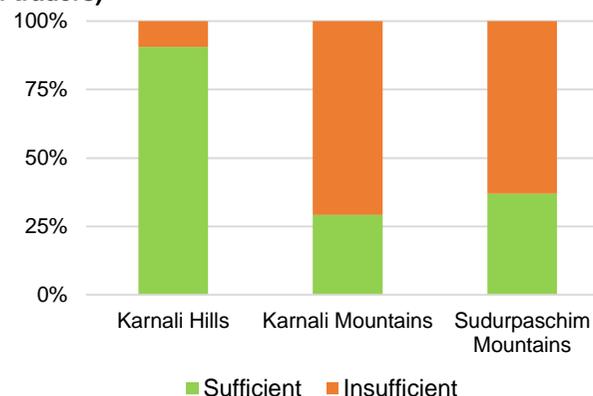
**Figure 6: Price trend of food commodities**



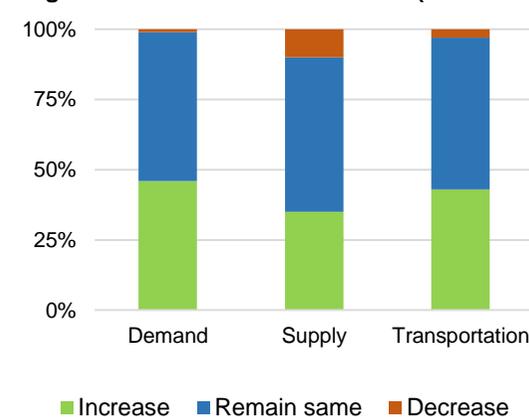
**Table 2 : Retail price of food commodities by strata (NPR/kg or ltr)**

	Coarse rice	Wheat flour	Soybean oil	Broken lentil	Potato	Chicken meat
<b>Karnali Hills</b>	47	55	161	123	34	365
<b>Karnali Mountains</b>	69	77	180	161	41	535
<b>Sudurpaschim Mountains</b>	46	52	166	151	38	444

**Figure 7 : Commodity availability in the markets (% of traders)**



**Figure 8: Current market situation (% of traders)**



# Determinants of food security

Households with fewer people, more assets, livestock, and engaged in cash crop production, salaried employment have on average better food consumption.

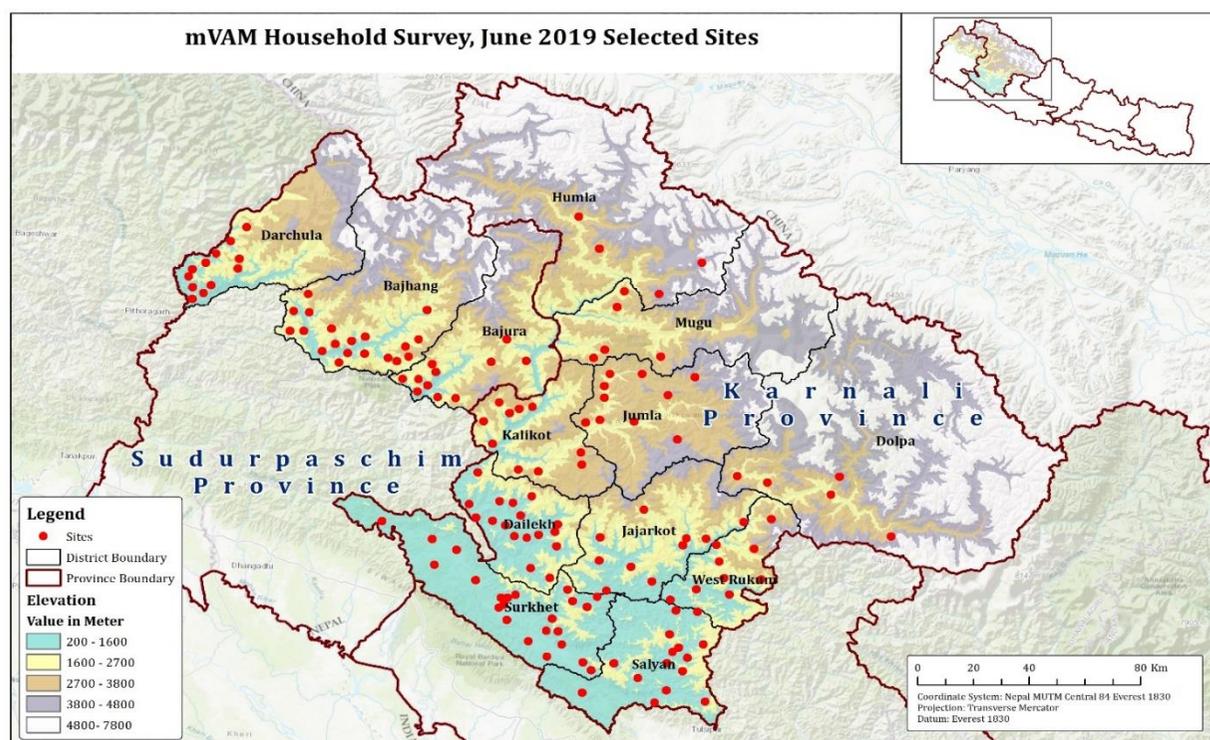
Despite considerable efforts to reduce hunger in Nepal, pockets of chronic food insecurity persist especially in the Mid-and Far-Western Mountain regions. In order to understand the determinants of food security in these areas, we model how variation in the food consumption score is informed by changes in key predictor variables. Food consumption has major determinants in demographic, asset, and livelihood dimensions of household.

Main findings from this analysis include: (1) more household members are associated with lower levels of food consumption. (2) Women heads of household are associated with a significant (2.5-point) positive difference in food consumption score controlling for other variables in the model used. This could be due to special attention placed by women heads of household on the diversity of the family's food intake. (3) Certain non-productive assets are better predictors of food consumption than productive assets. While the ownership of each cow/ yak/ buffalo is associated with a 1-point increase in the food consumption score, ownership of tables and chairs is associated with an 8-point increase in FCS, and ownership of fan/clocks in the house also associated with an over-5 point difference in FCS. These differences already hold constant the household's location and major type of livelihood, and suggest that there may be additional nuance to existing livelihood categorizations uncaptured in the mVAM data and responsible for differences in income, which could in turn explain asset ownership and food consumption score differences.

**Table 3 : Determinants of food security.**  
Dependent variable: Food Consumption Score

Predictor variables	Coefficients
Household size	-1.067 (0.5159)*
Female headed household	2.449 (0.9629)*
Yak/buffalo/cow	0.937 (0.3044)**
Pig	2.364 (1.3833)
Table/ chairs	8.184 (1.1874)**
Fan/ clocks	5.223 (1.89)**
Motorcycle	7.341 (2.5341)**
Cash cropping (vs. cereal agri)	6.278 (3.7237)
Salaried work (vs. cereal agri)	6.499 (1.7948)**
[location vector]	Y
Constant	56.814
$R^2$	0.341

\*\* and \* denote 1 and 5 percent levels of significance respectively, std errors in parentheses derived through Taylor series linearization



## Further information

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### Reference

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[http://vam.wfp.org/sites/mvam\\_monitoring/index.html](http://vam.wfp.org/sites/mvam_monitoring/index.html)

