COMPREHENSIVE NUTRITION AND FOOD SECURITY ASSESSMENT
UDAYAPUR DISTRICT, NEPAL

**ACTION AGAINST HUNGER** **ACTION CONTRE LA FAIM**

Action Against Hunger | Action Contre la Faim (ACF) Nepal conducted a comprehensive nutrition and food security assessment in Udayapur district in June 2022. Children aged 6-59 months whose parents/ caretakers consented to be part of the assessment were included. The assessment was conducted after seeking approval from District Coordination Committee.

Udayapur, one of the 14 districts in Province 1 of Eastern Nepal covers an area of 2,063 sq. km inhabited by 342,773 (Nepal Population Census, 2021). The district border of Udayapur is drawn by natural border with rivers and hills. Koshi river in the east of the district separates it from Sunsari district, Sunkoshi river in the north draw a borderline which separates it from Bhojpur and Khotang. Sindhuli district lies in the west across the Tawa Khola and foothills of Siwalik in the south separates it from outer Terai of Siraha and Saptari. The district is prone to natural disasters like flood and landslides as it resides on newly formed mountain Siwalik making the land fragile, and existence of many rivers and sloppy land (hills). Udayapur falls under Multi Sector Nutrition Plan priority district; however, there are no Outpatient Therapeutic Care Centres and/or Nutrition Rehabilitation Homes for provision of treating acutely malnourished children. The results of the assessment has provided the glimpse about the current situation of the nutritional and food security status, and the baseline information for nutrition specific and sensitive interventions in the district.

The nutritional status of children and women is still poor in the country despite of improvements in last few decades. According to the Nepal Demographic and Health Survey report, compared to stunting, Global Acute Malnutrition (GAM or wasting) has remained particularly unchanged over the last decade: 11% in 2001, 13 % in 2006, 11% in 2011 and 10% in 2016. Based on WHO classification of severity, the prevalence of acute malnutrition is above serious level (10%-14%) in Province 1, which is 11.8%.

WHAT METHOD WAS USED?
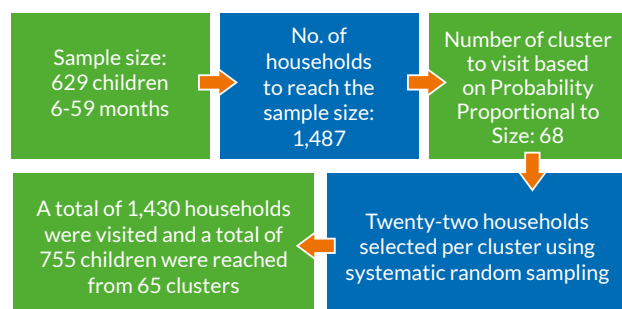
Standardised Monitoring and Assessment of Relief and Transition (SMART) methodology was applied in the form of cross sectional study design for measuring the nutritional status of children 6-59 months in the overall district. The anthropometry of the children 6-59 months (MUAC, height/length, weight) and assessment of bilateral pitting oedema was taken at the household level. Additional questionnaires related to food security status was also administered at the household level. Infection Prevention and Control measures for COVID-19 were followed throughout the assessment.

WHAT DID WE FIND?

PREVALENCE		
Wasting indicators	Weight for Height Z score (WHZ)	Mid Upper Arm circumference (MUAC)
Global Acute Malnutrition (GAM)	**15.1%** (12.1 - 18.8 95% C.I.)	**7.3%** (5.2 - 10.1 95% C.I.)
Moderate Acute Malnutrition (MAM)	**12.0%** (9.3 - 15.2 95% C.I.)	**6.2%** (4.4 - 8.7 95% C.I.)
Severe Acute Malnutrition (SAM)	**3.2%** (2.0 - 5.0 95% C.I.)	**1.1%** (0.5 - 2.3 95% C.I.)
Global Acute Malnutrition (combining WHZ & MUAC)	**17.2%** (13.9 - 21.1 95% C.I.)	
Severe Acute Malnutrition (combining WHZ & MUAC)	**3.7%** (2.4 - 5.7 95% C.I.)	

- Prevalence of Stunting was **26.4%** (22.9-30.1 95% C.I.)
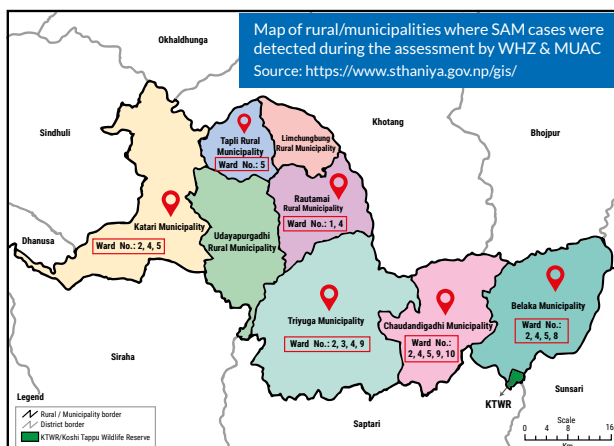- Prevalence of Underweight was **25.7%** (22.1-29.6 95% C.I.)

Gender based disaggregation of combined GAM and SAM based on WHZ and MUAC cut offs

| Indicator	Boys	Girls
Prevalence of combined GAM (WHZ <-2 and/or MUAC < 125 mm and/or oedema)	**16.0%** (12.3 - 20.6 95% C.I.)	**18.5%** (14.1 - 23.9 95% C.I.)
Prevalence of combined SAM (WHZ < -3 and/or MUAC < 115 mm and/or oedema	**3.5%** (2.0 - 6.2 95% C.I.)	**3.9%** (2.4 - 6.5 95% C.I.)

Age based disaggregation of SAM

Age (months)	% of SAM
6-17	4.5
18-29	3.3
30-41	1.8
42-53	3.0
54-59	2.3

Index of dispersion data has revealed that cases for wasting and underweight were aggregated into some specific clusters, while stunted children were normally distributed. The Index of Dispersion indicates the degree to which the cases are aggregated into certain clusters (the degree to which there are "pockets").

Map of rural/municipalities where SAM cases were detected during the assessment by WHZ & MUAC
Source: https://www.sthaniya.gov.np/gis/

It was also observed that among the wasted children (WHZ <-2 SD), 34.2% children were also stunted and 80.7% were underweight on top of wasting. This shows that children who are suffering from multiple types of undernutrition are at increased risk of death compared to children with one type of undernutrition or healthy.
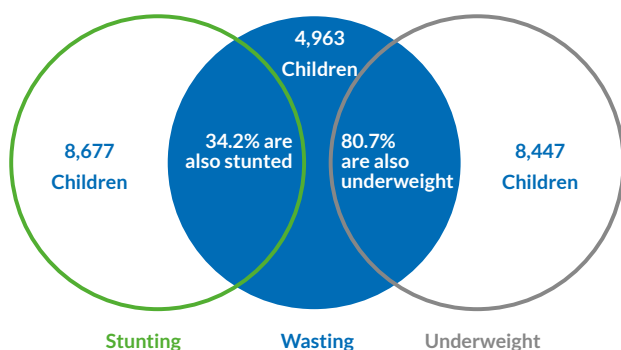
The average Household Dietary Diversity Score (HDDS) was found to be 6.96 and the reduced coping strategy index (rCSI) ranking was as low as '0' to as high as '30'. The HDDS and MUAC show strong correlation implying household dietary intake score affect the MUAC measurements of children. The HDDS indicates that there is inadequate diversified food consumed especially animal rich sources and milk/milk products at household level. This may ultimately lead to various deficiency diseases or malnutrition and hence important to consume a balanced diet with adequate amount of essential nutrients in it.

LIMITATIONS/CHALLENGES

- Three clusters could not be reached due to early monsoon and road blockage.
- High rate of absentees especially older children because they went to school/outside village and did not return during the data collection period.
- The geography considering accessibility, time required to travel from one to another has been quite a challenge.

DISCUSSION AND CONCLUSION

The nutrition situation in Udayapur district is of high concern, with a combined rate of global acute malnutrition of 17.2% (13.9-21.1, 95% C.I.), and a GAM rate based on WHZ at 15.1%. Further, the combined SAM rate is also 3.7%, which is worrisome. According to WHO and UNICEF new threshold set, the prevalence of wasting is at 'very high' and stunting at 'high' level. The prevalence of underweight is categorised as 'high' as per the WHO classification. As per the Health Management Information System (HMIS) target population 2021/22, 4,963 children of 6-59 months are acutely malnourished by WHZ with 1,052 children severely acutely malnourished in Udayapur district at any point of time. Combining both WHZ and MUAC, the cases remain as high as 5,653 acutely malnourished with 1,216 severely acutely malnourished children at any point of time.

RECOMMENDATIONS

Based on these findings, the key recommendations are:

- Design and implement Integrated Management of Acute Malnutrition programme with both nutrition specific and sensitive components to address the high burden of malnutrition
- Emphasise case detection by both active and passive screening (especially in identified pocket areas) taking MUAC and WHZ to find the missing cases not detected by MUAC standalone in community and health facility level linking with CB-IMCI
- Reinforce community based growth monitoring and promotion activities in health facilities focusing on identifying growth failure and promotion of age specific IYCF practices
- Highlight nutrition surveillance system through nutrition surveys to allow identification of malnutrition trends based on seasonality and different time periods
- Implement social and behaviour change communication interventions focusing on essential nutrition actions
- Design and implement targeted nutrition sensitive food security and livelihood activities, Baby WASH and other WASH related activities, in order to ensure multi sectoral approach to address malnutrition
- Advocate local government and other relevant stakeholders to invest in both nutrition specific and sensitive interventions
- Promote home gardening to improve dietary diversity especially among children contributing to good nutrition status
- Health system strengthening diagnosis, planning and strengthening should be implemented with focus on nutrition to address overall nutrition challenges in the district