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Nepal Food Security Monitoring System



**Child Nutrition  
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### Highlights

- Prevalence of global acute malnutrition (GAM) among the randomly sampled households in this round is 9.6%.
- Complementary feeding practices were less than optimal as only 29% of 6-23 months children were fed the WHO recommended minimum acceptable diet for their age (appropriate diversity at the right frequency per day).
- October-December is typically a period of food security across Nepal. According to the *Nepal Food Security Bulletin* Issue 30, the overall food security situation is reported to be stable across Nepal. The seasonal improvement in the food security is mainly attributed to the good harvest of summer crops in 2010, following a normal winter crop production in April/May.
- The prevalence of acute malnutrition noticeably decreased (4-5 folds) in the mountain and terai ecological belts, but nearly constant in Hill area in October-December 2010 period compared to last two quarters. This was consistent with food security trends in Mountain districts; Hill and Mountain districts also saw a significant decline in food insecurity status in October-December compared to July-September period.

### Introduction

Food insecurity and malnutrition among children are common in Nepal. Continuous monitoring of nutrition indicators, such as underweight among children less than 5 years of age, is essential for tracking the progress of the country in achieving the MDG targets (specifically MDG1: the eradication of extreme poverty and hunger). To address this issue, the World Food Programme (WFP) and Helen Keller International (HKI) have taken the joint initiative to include nutrition information as part of the Nepal Food Security Monitoring System (NeKSAP). The *Child Nutrition Bulletin* is the first nationwide monitoring system to collect nutritional indicators on a regular basis to assess how feeding and care practices and the prevalence of malnutrition change over time. This bulletin supplements *Nepal Food Security Bulletin #30*, and represents the third in a series of quarterly surveillance reports. This Bulletin will serve as a timely warning to assist policy-makers and program planners in understanding trend in child nutrition practices and their linkages with food security.

### Methodology

Child nutrition and food security data were collected on the families of total 497 children aged 0-59 months during the period from October-December 2010. Two sampling methodologies were utilized in this round: probability sampling and sampling by food security phase<sup>1</sup>. Information on Infant and Young Child Feeding (IYCF) practices and child illnesses were obtained through interviews with mothers, and children's mid upper arm circumference (MUAC) was measured to assess global acute malnutrition (GAM). In the analysis phase, prevalence estimates and cross-tabulations are done based on the probability samples of 252 children aged 0-59 months in order to get unbiased estimates. Food security phase samples of 245 children are used to compare the acute malnutrition rate with respect to the prevalent food security phase by agro-ecological belts (Fig.-1 and Fig.-2).

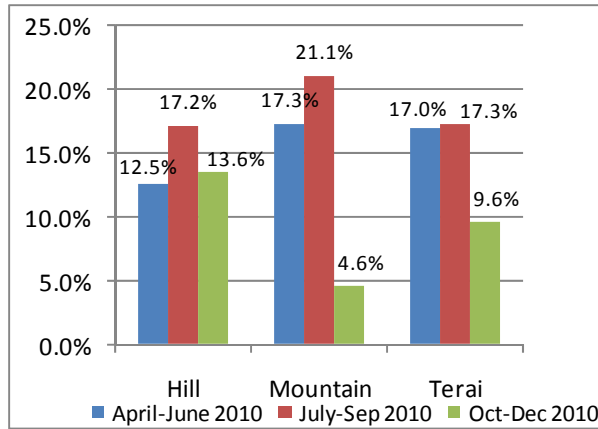
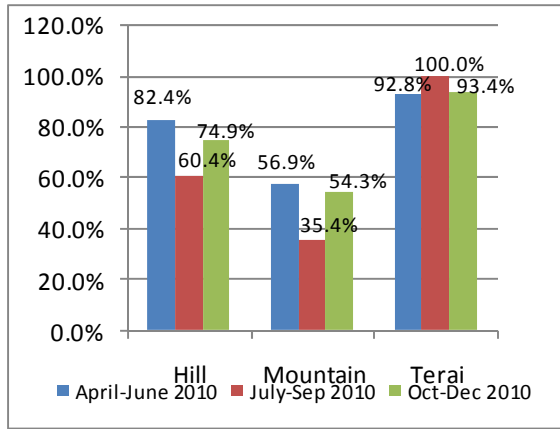
<sup>1</sup> A detailed description of the sampling methodology used is provided on the NeKSAP google site:  
[https://sites.google.com/site/nefoodsec/attachments/HH\\_SamplingDesign\\_2011.pdf?attredirects=0&d=1](https://sites.google.com/site/nefoodsec/attachments/HH_SamplingDesign_2011.pdf?attredirects=0&d=1).

**Acute Malnutrition and Food Security**

Among 240 children aged 6-59 months, 9.6% of children in our sample are suffering from global acute malnutrition, out of which 1.7% from severe acute malnutrition (SAM MUAC <115mm) and 7.9% from moderate acute malnutrition (MAM MUAC >115mm - <125mm). This round’s finding on SAM is 0.7% lower than the April-June and July-September period which estimated that 2.4% of children in this age group are SAM. The prevalence of MAM in this sample is lower compared to the NeKSAP surveillance data from the previous two rounds (April – June and July -September 2010). This could be due to the positive food security trend during this reporting period.

**Acute Malnutrition and Food Security by Ecological Belt**

The Mountain area improved in food security status accompanied by a drastic decreased prevalence of acute malnutrition (from 21.1% to 4.6%). The Hill areas remained relatively constant in both indicators. During this period, the prevalence of acute malnutrition among children 6-59 months was highest in the Hill areas and lowest in the Mountains. The Terai areas food security status remains nearly constant but the burden of GAM is reduced by 45% compared to last two round surveys.



**Fig; 1 Percentage of under 5 Children’s Households in VDCs Classified as Generally Food Secure (Phase 1) by Ecological Belts**      **Fig; 2 Prevalence of Acute Malnutrition by Ecological Belts in VDCs Classified as Generally Food Secure (Phase 1) by Ecological Belts**

**Complementary Feeding and Dietary Diversity**

Complementary feeding practices were less than optimal as only 29% of infants 6-23 months were fed the WHO recommended minimum acceptable diet for their age (appropriate diversity at the right frequency per day). This finding is slightly improved from previous rounds which found that only 17% (April-June) and 21% (July-September) of children in the 6-23 months age groups had received minimum acceptable diet in last 24 hours. Similarly, only 18%, 25% and 29.8% of the children aged group 6-23 months received the WHO recommended minimum dietary diversity during April-June, July-September and October-December 2010 period respectively.

**Care of Sick Children**

Prevalence of illness was lower during the October-December 2010 period and the prevalence of illness has significantly reduced in Terai (half) compared to Hill, Mountain in this period. Compared to the previous two surveys of April-June (52%) and July-September (41%), the disease prevalence is lower in October- December (34.5%) period. Care-takers reported that 12.9% of children 0-59 months in the random sample had suffered from diarrhea in the last two weeks, 10.8% had an acute respiratory infection and 32.4% suffered from another illness. Comparison of prevalence estimates with future surveillance bulletins will better enable our team to determine

whether the observed decrease during the October-December 2010 period is due to seasonal variation or sampling variability. It is also worth noting that these figures are higher than DHS 2006 estimates. This quarter's data does reveal, however, that sub-optimal feeding practices for sick children remain a challenge. Despite recommendations to increase feeding frequency during illness and for the two weeks after, sick children aged 6-59 months were fed on average 2.83 meals per day which was similar to the 2.76 meals fed to healthy children.

### ***Conclusion***

Despite some improvement in food security situation in this October – December 2010 round, GAM continues to affect nearly one in every ten 6-59 months aged children in Nepal. The quality of complementary foods given to children was low, with only 29% of children aged 6-23 months receiving the age appropriate minimum acceptable diet, as recommended by WHO. Data also suggests poor diversity of complementary foods with less than one third of the children receiving as per the WHO recommendations. Monitoring data indicates some links between household food insecurity and malnutrition among children living in the Hills and Mountain areas as the prevalence of malnutrition decreased with improved food security. However, there may be a need for in-depth study to understand the association between food insecurity and acute malnutrition, as well as with prevalence of illness.