
Nepal: Nutrition Profile

Malnutrition in childhood and pregnancy has many adverse consequences for child survival and long-term well-being. It also has far-reaching consequences for human capital, economic productivity, and national development overall. The consequences of malnutrition are a significant concern for the Government of Nepal, since around 1 million children under 5 years (36 percent) suffer from chronic malnutrition (stunting or low height-for-age) and 10 percent suffer from acute malnutrition (wasting or low weight-for-height) (Ministry of Health (MOH) et al. 2017).

Background

Landlocked between India and China, Nepal is among the poorest countries in the world—25 percent of its population live below the national poverty line of US\$ 0.50 per day (WFP 2017)—and it ranks 144th out of 188 countries on UNDP’s 2016 Human Development Index (UNDP 2016). The country is going through a prolonged transition to peace and stability after 20 years of political instability and 10 years of violent conflict, which ended in 2006 with a peace agreement between the Maoists and the Government. The country has transitioned to a federal democratic government by electing a parliament in December 2017, and a new prime minister in February 2018 (World Bank 2017).

Nepal faces many challenges to economic growth, human development, and food security, including recovery from a devastating earthquake in 2015 that left 1.4 million people in need of food assistance, as well as bottlenecks to public and private investments, poor infrastructure, a difficult regulatory environment, poor access to power, the lowest road density in South Asia, high susceptibility to climate change (including floods), and weak governance (USAID 2017a; World Bank 2017; USAID 2017b). Gender and caste relationships play an important role in food security in the country, with women and lower castes facing unequal access and opportunities to improve their food security (USAID 2017a).

The agricultural sector employs around 66 percent of the population, but it struggles to produce an adequate supply of food for the country. Poor growth in agricultural production in Nepal has resulted in depressed rural economies, widespread hunger, and increased malnutrition (USAID 2017a). As a result, addressing food security is a national priority for the Government of Nepal, which has made commitments to reduce food insecurity and improve resilience to shocks (USAID 2017a)

Currently, Nepal ranks 105th out of 157 countries in progress towards meeting the Sustainable Development Goals (SDGs) (Sachs et al. 2017). According to the most recent Demographic and Health Survey (DHS) in Nepal (2016), the maternal mortality ratio is 239 per 100,000 live births, meaning 1 out of every 167 women have a lifetime risk of dying related to pregnancy or childbearing. Nepal has made significant strides in reducing neonatal, infant, and under-5 mortality (around a 60 percent reduction between 1996 and 2016), but additional work is required to further reduce child mortality and to meet the SDG targets for neonatal and under-5 mortality (MOH 2017).

Nutrition and Food Security Situation

Nepal has made impressive strides in reducing the prevalence of stunting (chronic undernutrition) nationally, which fell from 57 percent in 2001, to 36 percent in 2016 (MOH et al. 2017; Family Health Division et al. 2002). Stunting prevalence for children under 5 years does vary by region; it is 55 percent in Province 6 and 29 percent in Province 4. Moreover, the chronic undernutrition rate varies by maternal education and wealth levels—23 percent of children whose mothers have secondary education are stunted, while the rate rises to 46 percent of children whose mothers had no formal education. Similarly, 17 percent of children in the highest wealth quintile are stunted, as compared to 49 percent of children in the lowest wealth quintile (MOH et al. 2017). Nationally, stunting is most prevalent among

children 24–35 months (MOH et al. 2017). Wasting (acute malnutrition) is around 10 percent of children under 5, which is deemed “high” according to the 2017 WHO public health prevalence thresholds (MOH et al. 2017; WHO and UNICEF 2017).

Poor maternal nutrition, especially among adolescent girls, significantly contributes to an intergenerational cycle of malnutrition and poverty. Forty-one percent of women suffer from anemia, which is an increase from 35 percent in 2011 (MOH et al. 2017; MOH et al. 2012). In addition, 17 percent of women 15–49 years of age are underweight (BMI < 18.5), and 30 percent those are adolescent girls 15-19 years of age. Although undernutrition remains a significant issue in Nepal, overweight and obesity are also becoming health concerns, with 22 percent of women overweight or obese (MOH et al. 2017).¹

Thirty-six percent of adolescent girls have begun childbearing by 19 years of age, a prevalence which has only reduced by 5 percentage points since 2001 (MOH et al. 2017; Family Health Division et al. 2002). The high prevalence of adolescent underweight, combined with the persistent and high adolescent pregnancy rate, is a disturbing trend. Adolescent pregnancy is associated with a 50 percent increased risk of stillbirth and neonatal death, and an increased risk of low birth weight, premature birth, asphyxia, and maternal mortality (Bhutta et al. 2013; WHO 2007). Furthermore, the risk of stunting is 36 percent higher among first-born children of girls under 18 years in South Asia (Fink et al. 2014). Reducing the adolescent fertility rate and delaying first pregnancy beyond adolescence will reduce the risk of low birth weight and stunting in children and will allow adolescent girls to grow to their full potential, protecting their own nutritional status over the long term.

Inadequate infant and young child feeding (IYCF) practices also contribute to high prevalence of undernutrition. The prevalence of exclusive breastfeeding overall has declined from 70 percent in 2011, to 66 percent in 2016. Only 55 percent of infants were put to the breast within an hour of birth (MOH et al. 2017). Additionally, complementary feeding practices are poor, with only 36 percent of breastfed children 6–23 months receiving a minimum acceptable diet (MOH et al. 2017).

While iodine deficiency has become less of an issue in Nepal² due to the effective salt iodization policy (95 percent of children under 5 years of age live in households with iodized salt) (MOH et al. 2017), other micronutrient deficiencies are still highly prevalent. Although a majority of children 6–59 months were reached through the vitamin A supplementation program (86%) in the 6 months preceding the survey, the consumption of vitamin A-rich foods among children 6–23 months stands at 63 percent. This suggests that vitamin A deficiency may still be an issue, particularly among children 6–59 months (MOH et al. 2017). Also, anemia continues to be a widespread problem, with prevalence increasing from 46 percent in 2011, to 53 percent in 2016 among children 6–59 months, and from 35 percent to 41 percent among women of reproductive age over the same time period (MOH et al. 2017; MOH et al. 2012).

Nepal Nutrition Data (DHS 2011 and 2016)		
Population 2016 (UNICEF 2017)	29 million	
Population under 5 years of age (0–59 months) 2016 (UNICEF 2017)	2.8 million	
	DHS 2011	DHS 2016
Prevalence of stunting among children under 5 years (0–59 months)	41%	36%
Prevalence of underweight among children under 5 years (0–59 months)	29%	27%
Prevalence of wasting among children under 5 years (0–59 months)	11%	10%
Prevalence of low birth weight (less than 2.5 kg) (of children whose birth weights are known)	12%	12%
Prevalence of anemia among children 6–59 months	46%	53%
Prevalence of anemia among women of reproductive age (15–49 years)	35%	41%

¹ Note that women in the highest wealth quintile are more likely to overweight/obese at 45 percent, as compared to 10 percent of women in the lowest wealth quintile.

² As typically with many countries, iodine deficiency and excess may exist in areas throughout Nepal.

Prevalence of thinness among women of reproductive age (15–49 years) (BMI less than 18.5 kg/m ²)	18%	17%
Prevalence of thinness among adolescent girls (15–19 years)	26%	30%
Prevalence of children 0–5 months exclusively breastfed	70%	66%
Prevalence of children 4–5 months exclusively breastfed	53%	41%
Prevalence of early initiation of breastfeeding (i.e., put to the breast within 1 hour of birth)	45%	55%
Prevalence of children who receive a pre-lacteal feed	28%	29%
Prevalence of breastfed children 6–23 months receiving minimum acceptable diet	24%	36%
Prevalence of overweight/obesity among children under 5 years (0–59 months)	1%	1%
Prevalence of overweight/obesity among women of reproductive age (15–49 years)	14%	22%
Coverage of iron for pregnant women (for at least 90 days)	56%	71%
Coverage of vitamin A supplements for children (6–59 months)	90%	86%
Percentage of children 6–59 months living in households with iodized salt	73%	95%

Global and Regional Commitment to Nutrition and Agriculture

Nepal has made the following global and regional commitments to nutrition and agriculture:

Year of Commitment	Name	Description
2012	Committing to Child Survival: A Promise Renewed	Nepal pledged to reduce under-5 mortality to 20 or fewer deaths per 1,000 live births by 2035 by reducing the leading preventable causes of child mortality, including undernutrition (A Promise Renewed 2017).
2011	Scaling Up Nutrition (SUN) Movement	In 2011, Nepal joined SUN, a global movement that unites national leaders, civil society, bilateral and multilateral organizations, donors, businesses, and researchers in a collective effort to improve nutrition. The World Bank is the convening donor for SUN in Nepal. SUN's priority commitments in Nepal are to implement and scale up evidence-based, cost-effective nutrition programs outlined in the Multi-Sectoral Nutrition Plan (MSNP); develop and implement a long-term National Food Security and Nutrition Action Plan; strengthen key sectors to implement and monitoring of the MSNP II and National Food Security and Nutrition Plan.

National Nutrition Policies/Legislation, Strategies, and Initiatives

Nepal's commitment to improving nutrition is outlined in the following documents which are aligned with the Government's Vision 2030:

- The Multi-Sectoral Nutrition Plan II (MSNP) 2018–2022
- Multi-Sectoral Action Plan for the Prevention and Control of Non-Communicable Diseases (2014–2020)
- Five-Year Plan of Action for the Control of Anemia among Women and Children in Nepal (2006–2009)
- Five-Year Plan for Sustained Iodine Deficiency Disorder Elimination
- National Nutrition Policy and Strategy (2004)
- Mandatory Flour Fortification (2011)
- Maternal, Newborn, and Child Health Communication Strategy (2011)
- National School Health and Nutrition Strategy (2006)
- Food and Nutrition Security Plan (2013) (part of the Agriculture Development Strategy)
- Health Sector Strategy for Addressing Maternal Undernutrition (2013–2017)
- Communication Framework for Maternal, Infant, and Young Child Nutrition Maternal Nutrition Strategy

Government initiatives have been underway for more than three decades, with national nutrition strategies developed in 1978, 1986, 1998, and 2004. The Multi-Sectoral Nutrition Plan (MSNP) 2013–2017 served as a common results framework for improving nutrition outcomes and setting out plans of action for implementing nutrition-sensitive policies and strategies for key sectors, including agriculture, health, and education. On December 14, 2017, the Government of Nepal launched the MSNP II. The objectives of the MSNP II are to reduce the prevalence of stunting to 28 percent and of wasting to 7 percent among children under 5, and to reduce undernutrition (BMI < 18.5) to 12 percent among women 15–49 years of age.

USAID Programs: Accelerating Progress in Nutrition

As of January 2018, the following USAID programs with a focus on nutrition were active in Nepal. The U.S. Government selected Nepal as one of 12 Feed the Future target countries for focused investment under the new U.S. Government Global Food Security Strategy.

Selected Projects and Programs Incorporating Nutrition in Nepal		
Name	Dates	Description
Global Food Security Strategy (GFSS)	2018–2022	The U.S. Government’s global food and nutrition security initiative recognizes the need to build resilience among vulnerable populations in response to changing climates, low agricultural productivity, weak market linkages, poor extension services, rising food prices, and inadequate consumption of nutritious food. The strategy is made up of three separate but mutually reinforcing components: inclusive and sustainable agricultural-led economic growth; resilience among people and systems; and a well-nourished population, especially among women and children, with the overall goal of sustainably reducing hunger, malnutrition, and poverty. The GFSS Nepal Country Plan builds on the successes from the 2011–2017 Feed the Future (FTF) Multi-Year Strategy, which improved the productivity of participating farmers in targeted value chains and expanded access to markets and services to marginalized and disadvantaged groups. The GFSS targets 24 districts in the Hill and Terai areas in most of Province 5, and parts of Province 3, 6, and 7. These districts were selected based on poverty and hunger indexes, sales of household assets due to food insecurity, male and youth migration, prevalence of female-headed households, and potential for returns on investment.
Knowledge-Based Integrated Sustainable Agriculture in Nepal (KISAN) II Project	2017–2022	KISAN II contributes to GFSS’s overarching goal of global food and nutrition security through “inclusive agriculture growth” and aims to reach up to 900,000 rural Nepalese by working with 200,000 farm households through agriculture interventions that improve food

		<p>security and increase income in the target geographical areas. The project focuses on small farmers in districts with the highest prevalence of food insecurity and includes measures to target traditionally excluded and marginalized groups and vulnerable households. To scale up small-scale commercial agriculture, KISAN II will employ a “push-pull” approach to its outreach and engagement with beneficiaries. Push strategies help poor farmers and individuals build the capacity to participate in intensification, diversification, and value addition activities. Pull strategies increase the demand for smallholder production, labor, and related goods and services and improve the affordability and accessibility of skills, resources, inputs, and supporting services needed to participate in competitive markets. KISAN II will tailor its approach to empower and graduate farming households into more productive, reliable, and lucrative agricultural enterprises, evolving from vulnerable to developing, then commercially-minded, and finally, competitive household agricultural enterprises. KISAN II focuses its interventions on maize, rice, lentils, high-value vegetables, and goats to improve local nutrition as well as generate income through sales and marketing, working in close collaboration with the Suaahara II project for improved nutrition.</p>
<p>Suaahara II-Integrated Nutrition Program (Good Nutrition)</p>	<p>2016–2021</p>	<p>The goal of the project is to improve the nutritional status of women and children in all “first 1,000-days” households in 40 out of 75 districts in Nepal. It is a comprehensive, household-based program that works to: improve household nutrition and health behaviors; improve the use of quality health and nutrition services; increase access to diverse nutrient-rich food; and accelerate the roll-out of the national MSNP through strengthened local governance. Suaahara II complements the Government of Nepal’s nutrition and health priorities for pregnant and lactating women, children under 5, and their families. The project focuses on improving: nutrition; maternal, newborn, and child health (MNCH) services; reproductive health/family planning services; WASH; and home-based gardening. The project works within the government system as an integrated nutrition program, with its efforts driven primarily by Female Community Health Volunteers (FCHVs) and other community extension workers. FCHVs disseminate critical health messages, services, and commodities at the household level and through mothers’ group discussion forums. They also use homestead food production and village-model farm techniques to promote better access to nutritious foods. Health facility capacity building includes training on growth monitoring, IYCF counseling, nutrition education, integrated management of acute malnutrition, and micronutrient supplementation.</p>
<p>Feed the Future Nutrition Innovation Lab</p>	<p>2016–2020</p>	<p>The FTF Nutrition Innovation Lab provides technical assistance to generate impactful policy and relevant research outputs on the effectiveness of integrated interventions targeting nutrition outcomes in vulnerable populations, such as women, infants, and young children. The project also disseminates research findings through publications, presentations, briefs, and reports; enhances individual capacity building through short- and long-term training; and enhances institutional capacity through professional training, workshops, and nutrition curriculum development. In Nepal, Policy</p>

		and Science for Health, Agriculture, and Nutrition (PoSHAN) is conducting annual household panel surveys and a parallel longitudinal policy process survey to study the impact of multi-sectoral programming and policymaking processes on nutritional outcomes. Additionally, the FTF Nutrition Innovation Lab is conducting a mycotoxin birth cohort study in Nepal. The mycotoxin study will contribute to a deeper understanding of how maternal exposure to aflatoxins during pregnancy may affect birth outcomes and subsequent child growth.
Food for Peace Promoting Agriculture, Health, and Alternative Livelihoods (PAHAL)	2014–2019	PAHAL aims to build the resilience of up to 75,000 households in 14 food-insecure districts in Nepal. It focuses on diversifying agricultural and non-agricultural livelihoods and response strategies; strengthening participatory planning and the capacity of disadvantaged groups; training on disaster risk management and vocational skills; and improving WASH practices and natural resource management.
Food for Peace Sustainable Action for Resilience and Food Security (SABAL)	2014–2019	The SABAL project aims to build resilience and improve food security and nutrition outcomes at the individual, household, and community level in 8 districts in Nepal. It builds on the nutrition approach developed by the Suaahara project, while providing interventions across sectors including agriculture, livelihood diversification, and disaster risk reduction. Specific project activities include: behavior change related to nutrition and water, sanitation, and hygiene (WASH); infant and young child feeding; agricultural activities; vocational training for off-farm livelihoods; strengthening financial linkages; and supporting integrated disaster risk management and climate change adaptation at the village development committee level, among other things.
Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss	2017–2018	The FTF Innovation Lab for the Reduction of Post-Harvest Loss is conducting research on characterizing the prevalence of mycotoxins in value chain crops and livestock feed in Nepal. The objective of the study is to determine the prevalence of several types of mycotoxins that are present in value chain crops (maize, ground nuts, and chilis) and livestock feed in the Feed the Future Zone of Influence in Nepal. Moreover, the study will explore options for reducing the prevalence of mycotoxins and build human and institutional capacity to carry out studies in the future.

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