The conceptual framework highlights underlying causes of malnutrition and illustrates the need for a multi-sectoral approach.

Outcomes

Malnutrition, death and disability

Immediate causes

Inadequate dietary intake

Diseases

Underlying causes at household / family level

Insufficient access to FOOD

Inadequate maternal and child CARE practices

Poor water and sanitation, and inadequate HEALTH services

Basic causes at societal level

The enabling environment for improved nutrition refers to the level of political commitment, quality of policies and plans, the level of engagement across different sectors, and the amount of capacity and investments for implementation.

Also includes: economic, human and organisational resources and the way they are controlled, income and social disparities, level of social protection, urbanization, agricultural development, food systems, globalization, and women’s empowerment.

Source: Adapted from UNICEF and Global Nutrition Report 2016
The nutrition situation in Myanmar
While prevalence of stunting and wasting has declined, both remain a significant public health issue.

Myanmar still has a high prevalence of stunting in children <5 years old

<table>
<thead>
<tr>
<th>Year</th>
<th>2000*</th>
<th>2003*</th>
<th>2009</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of children &lt;5 years</td>
<td>40.8%</td>
<td>40.6%</td>
<td>35.1%</td>
<td>29.2%</td>
</tr>
</tbody>
</table>

Prevalence of wasting in children <5 years old Has declined but still remains high

<table>
<thead>
<tr>
<th>Year</th>
<th>2000*</th>
<th>2003*</th>
<th>2009</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of children &lt;5 years</td>
<td>10.7%</td>
<td>10.7%</td>
<td>7.9%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

WHO thresholds for assessing severity of malnutrition:

- very high
- high
- medium

*Note: Prevalence values recalculated to apply the 2006 WHO Child Growth Standards
Stunting prevalence is highest in Chin, however Shan and Ayeyawaddy have the highest absolute numbers of stunted children.

Prevalence of stunting among <5 year olds
- <20%
- 20-29.9%
- 30-39.9%
- ≥40%

Absolute number of stunted children <5 year olds
- <50,000
- 50,000 – 100,000
- 150,000 – 200,000
- ≥200,000

Sources: 2014 Myanmar Population and Housing Census (Volume 4-F); Myanmar DHS 2015-16
Emergency situations need to be considered as a contributing factor to nutrition outcomes, especially the prevalence of wasting.

**National emergency threshold:**
GAM >=15% or 10-14% with aggravating factors (national IMAM operational guidelines)

**RAKHINE**
- Inter-communal violence
- Population displacement (120,000 IDPs + 24,000 new IDPs)
- Food Insecurity
- Highest GAM rate in Myanmar:
  - Rakhine 13.9%

**KACHIN**
- Armed conflict
- Population displacement (86,000 IDPs since 2011 + 7,000 new IDPs in 2016/2017)
- Nutritional vulnerability

**SHAN**
- Armed conflict
- Population displacement (13,000 IDPs + 4,000 new IDPs in 2016/2017)
- Nutritional vulnerability

**NATURAL DISASTERS**
- Floods, landslides, earthquakes, drought
- Most affected States: Chin, Magway, Ayeyawaddy, Sagaing, Rakhine, Kachin, Shan

Sources: Myanmar DHS 2015-16; Myanmar Food Security Atlas 2016; ACF SMART Survey
Anaemia levels of children and women remain high, both a severe public health problem

Over half of all children under 5 years have anaemia, despite estimated improvements

**Consequences:**
- Reduced immunity
- Increased risk of maternal / perinatal mortality
- Intrauterine growth retardation
- Premature births
- Reduced cognitive and psychomotor development
- Reduced ability to concentrate / scholastic performance
- Fatigue, reduced physical capacity / activity

**Assessment:**
- Anaemia is a proxy for iron deficiency
- Measuring *hemoglobin levels in the blood* is the most common a biochemical indicator with different cut-offs for different sub-groups and environmental factors (e.g. altitude)

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*Note: value is regression-based estimate
Sources: Myanmar DHS 2015-16; WHO 2008; NNC 2001
Underlying causes
Care Practices
Looking at dimensions, trends and causes
Two thirds of newborns are breastfed within the first hour of birth

Colostrum is contained in the mother’s first milk, just after birth. It contributes to the prevention of infections and is extremely rich in nutrients. Early initiation to breastfeeding promotes good lactation; it also presents a series of benefits for post-partum mothers.

- Only two thirds (66.8%) of newborns are breastfed within the first hour of birth, despite the international recommendations (WHO).
- There was a significant drop in early initiation of breastfeeding since 2009 (9% points).

More than half of all children under 6 months are exclusively breastfed, as globally recommended.

Exclusive breastfeeding has increased between 2009 and 2016

% children <6 months

- **2009**: 23.6%
- **2016**: 51.2%

Exclusively breastfeeding decreases as children reach 6 months of age

% children <6 months

- **0-1 months**: 70.7%
- **2-3 months**: 52.7%
- **4-5 months**: 38.2%

Source: MICS 2009; Myanmar DHS 2015-16
Few children 6-23 months receive adequate infant and young child feeding (IYCF) practices

- The vast majority (89.3%) of all children 6-23 months of age receive breastmilk, breastmilk substitutes, or milk products at least twice per day.
- Less than a quarter (24.8%) of children 6-23 months of age received a diverse diet of 4 or more different food groups.
- Over half (57.6%) of the children 6-23 months of age were fed the minimum recommended number of times per day according to their age.
- As a result, only 15.9% of children 6-23 months of age received an adequately diverse diet according to the three IYCF feeding practices.

Source: Myanmar DHS 2015-16
Food Security
Looking at dimensions, trends and causes

slides from Food Security and Poverty Estimation Surveys (2013-2015), supported by WFP and DRD
The main economic activity in Myanmar is related to food production.

More than half of the population is dedicated to activities related to agriculture, forestry and fishing.

- Agriculture, forestry and fishing: 52.2%
- Other activities: 18.4%
- Wholesale and retail trade (motor vehicles): 9.4%
- Manufacturing: 6.8%
- Accommodation and food service activities: 4.7%
- Construction: 4.6%
- Transportation and storage: 3.9%

Source: 2014 Myanmar Population and Housing Census (Volume 2-B)
Interpolation of village level data tells us that diet inadequacy is high and gaps exist within states and regions

• Despite a lower incidence, the number of households with inadequate diet is also high in many areas of the Delta, the Dry Zone and South East due to high population densities.

• 2.1 million households, which correspond to 25.9% of the rural population, registered a poor diet the week prior to the survey; there was higher incidence among female headed households (26.6%).

The incidence of households experiencing food gaps is the highest in the monsoon season

- Households experiencing longer food gaps are localized in South Chin, Central Sagaing, Rural Yangon, South Kayah and South Shan

- Average food gaps duration is correlated with soil fertility

- Chin North (97%), Chin South (88%) and Shan South (73%) show the highest shares of food gaps while Mon (29%) and Tanintharyi (42%) the lowest

% of households experiencing food gaps by month

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2%</td>
</tr>
<tr>
<td>February</td>
<td>4%</td>
</tr>
<tr>
<td>March</td>
<td>3%</td>
</tr>
<tr>
<td>April</td>
<td>5%</td>
</tr>
<tr>
<td>May</td>
<td>6%</td>
</tr>
<tr>
<td>June</td>
<td>12%</td>
</tr>
<tr>
<td>July</td>
<td>15%</td>
</tr>
<tr>
<td>August</td>
<td>13%</td>
</tr>
<tr>
<td>September</td>
<td>10%</td>
</tr>
<tr>
<td>October</td>
<td>7%</td>
</tr>
<tr>
<td>November</td>
<td>4%</td>
</tr>
<tr>
<td>December</td>
<td>2%</td>
</tr>
</tbody>
</table>

Health Services and Environment
Looking at dimensions, trends and causes
Although most women have had at least one antenatal visit with a qualified health personnel, fewer are likely to receive the recommended four visits.

About one fifth of women do not receive antenatal care at any point during their pregnancy.

Women in urban areas are more likely to received antenatal care 4+ times during pregnancy than women in rural areas.

The antenatal period is an important window for reaching pregnant women with interventions vital to their health, and the health/survival of their infants.

Source: MICS (2003, 2009); Myanmar DHS 2015-16
Just over half of all children received vitamin A supplementation, however there is no data about how many had a deficiency.

<table>
<thead>
<tr>
<th>Prevalence of Vitamin A Supplementation among children 6-59 months varies across states/regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of children 6-59 months</td>
</tr>
<tr>
<td>Kayah</td>
</tr>
<tr>
<td>Sagaing</td>
</tr>
<tr>
<td>Mon</td>
</tr>
<tr>
<td>Kachin</td>
</tr>
<tr>
<td>Mandalay</td>
</tr>
<tr>
<td>Rakhine</td>
</tr>
<tr>
<td>Bago</td>
</tr>
<tr>
<td>Chin</td>
</tr>
<tr>
<td>Tanintharyi</td>
</tr>
<tr>
<td>Magway</td>
</tr>
<tr>
<td>Yangon</td>
</tr>
<tr>
<td>Ayeyarwady</td>
</tr>
<tr>
<td>Shan</td>
</tr>
<tr>
<td>Kayin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vitamin A supplementation for children and post partum mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of children &lt;5 years</td>
</tr>
<tr>
<td>% of post-partum mothers</td>
</tr>
</tbody>
</table>

- Vitamin A is essential for vision and proper functioning of the immune system, especially in children and pregnant and lactating women. Supplements can help children who do not have a balanced diet to receive the vitamins they need.

Source: Myanmar DHS 2015-16
The consumption of unsafe water can cause water-borne diseases and affect the body's ability to absorb nutrients.

The use of improved sources for drinking water is higher in urban areas.

About 28% of households in rural areas report unimproved sources of drinking water.

Source: Myanmar Population Census (2014)
Basic causes and the enabling environment
Household poverty is a determinant of the nutritional status of children, especially stunting.

Household income is directly linked to stunting of children, however undernutrition is present even in the richest households – addressing poverty alone is therefore not sufficient to eliminate undernutrition.

Source: Myanmar DHS 2015-16
Malnutrition is an issue in urban areas, especially in Yangon

- **Migration as a coping strategy** for many households → **urbanization**
- Extremely rapid urban growth in **Yangon** → rural to urban migration

- Urbanization poses detrimental risks on children’s health and growth, including:
  - Limited access to health, safe water, sanitation, nutrition services, suboptimal hand washing practices
  - Food insecurity and poor access to nutritious food
  - Flood and disasters exposed areas

**Prevalence of wasting**

<table>
<thead>
<tr>
<th></th>
<th>% children &lt;5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>8.9%</td>
</tr>
<tr>
<td>Rural</td>
<td>6.5%</td>
</tr>
<tr>
<td>Yangon</td>
<td>12.6%</td>
</tr>
</tbody>
</table>

**Prevalence of anaemia in children**

<table>
<thead>
<tr>
<th></th>
<th>% children &lt;5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>58.7%</td>
</tr>
<tr>
<td>Rural</td>
<td>57.5%</td>
</tr>
<tr>
<td>Yangon</td>
<td>66.3%</td>
</tr>
</tbody>
</table>

Source: Myanmar DHS 2015-16