Nepal

Nutrition Analysis
August 2013
Nutrition Situational Analysis
Key messages on child under nutrition trends in Nepal

✓ 3.2 million children <5 years comprise 11% of the total population
✓ Nepal is 2% points away from achieving the MDG for prevalence of underweight among under five children; Stunting and wasting are still a challenge
✓ Reduction in severe stunting but severe wasting prevalence shows no improvement
✓ As of 2011, Central Nepal has the largest number of severely stunted and wasted children
✓ Largest number of stunted children in Central region but stunting prevalence high in Mid and Far Western regions
✓ Central region has the highest prevalence of wasting in the country and has the largest number of children suffering from it
Nepal is 2 percentage points away from achieving the MDG for prevalence of underweight among under five children; Stunting and wasting are still a challenge.

Source: NDHS 2011, WHO conversion tool
Reduction in severe stunting but severe wasting prevalence shows no improvement

Severe stunting decreased nearly 4 percentage points from 2006-2011

Severe wasting has remained unchanged between 2005-2011

Source: NDHS 2011,
Central Nepal has the largest number of severely stunted children.

Central Nepal has the largest number of severely wasted children.

Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu, NDHS 2011

Severe wasting 2011 (absolute numbers)

<table>
<thead>
<tr>
<th>Region</th>
<th>Absolute numbers '000</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>34,691</td>
<td>3.1%</td>
</tr>
<tr>
<td>Mid-western</td>
<td>15,714</td>
<td>2.5%</td>
</tr>
<tr>
<td>Western</td>
<td>13,212</td>
<td>2.8%</td>
</tr>
<tr>
<td>Far-western</td>
<td>11,271</td>
<td>3.2%</td>
</tr>
<tr>
<td>Eastern</td>
<td>12,710</td>
<td>1.8%</td>
</tr>
</tbody>
</table>
Largest number of stunted children in Central region but stunting prevalence high in Mid and Far Western regions

Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu, NDHS 2011
Central & Western regions have experienced the largest decrease in prevalence of stunting since 2006

Changes in stunting prevalence 2006-11 (in % points)

Decreases in prevalence of stunting

-5% 3% 12% 13% 8% 7%

Far-western
Mid-western
Western
Central
Eastern

Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu, NDHS 2011
Largest number of children suffering from wasting in the Central region; it also has the highest prevalence of wasting in the country.

The Far-western region has seen nominal decrease in the prevalence of wasting while wasting levels in the Eastern region remain unchanged.

Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu, NDHS 2011
Tackling malnutrition required an integrated approach addressing food, care issues and health

The conceptual framework for analysing causes of malnutrition

Outcomes

Linked to:

Immediate causes

Underlying causes at household/family level

Basic causes at societal level

Malnutrition, death & disability

Inadequate dietary intake

Disease

Insufficient access to FOOD

Inadequate maternal & child CARE practices

Poor water, sanitation & inadequate HEALTH services

Quantity and quality of actual resources – human, economic & organisational - and the way they are controlled

Potential resources: environment, technology, people

Source: UNICEF
Care Practices
Key messages on care practices and trends

✓ Central region has the lowest % of breastfeeding initiation within one hour birth and highest prevalence of stunting

✓ Consumption of Complementary foods along with breastfeeding has declined since 2006 across all age groups

✓ Central and Mid-Western regions with lowest adherence to 3 IYCF feeding practices, also have the highest prevalence of severe wasting and stunting

✓ Central region has seen the biggest drop in children being fed according to all 3 IYCF practices followed by Western and Far-Western region; These are regions with highest prevalence of severe wasting and severe stunting

✓ Worsening dietary diversity component is main cause of the drop in children being fed with 3 IYCF practices
Central region has the lowest % of breastfeeding initiation within one hour birth and highest prevalence of stunting

Among last-born children born in the past two years who were ever breastfed

Source: NDHS 2011
Percentage of children (6-23 months) who are initiated on complementary foods rises as the percentage of children exclusively breastfed reduces.

Source: NDHS 2011
Central and Mid-Western regions with lowest adherence to 3 IYCF feeding practices, also have the highest prevalence of severe wasting and stunting.

Among all children in Nepal 6-23 months, %fed with 3IYCF practices, 2011

Source: NDHS 2011
Central region has seen the biggest drop in children being fed according to all 3 IYCF practices followed by Western and Far-Western region.

Source: NDHS 2011
Central & Mid-Western regions are areas with lowest adherence to 3 IYCF practices and highest prevalence in severe wasting

3 IYCF feeding practices Vs severe wasting, 2011

Source: NDHS 2011
Central & Mid-Western regions are areas with lowest adherence to 3 IYCF practices and highest prevalence in severe stunting

3 IYCF feeding practices Vs severe stunting, 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>% of Children &lt;2 years, fed with 3 IYCF practices</th>
<th>Severe Stunting for children &lt;5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>29%</td>
<td>13%</td>
</tr>
<tr>
<td>Central</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Western</td>
<td>33%</td>
<td>15%</td>
</tr>
<tr>
<td>Mid-western</td>
<td>21%</td>
<td>19%</td>
</tr>
<tr>
<td>Far-western</td>
<td>26%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: NDHS 2011
Worsening dietary diversity component is the main cause of the drop in percentage of children (6-23 months) being fed with 3 IYCF practices.
Food Security
Key messages on food security and trends

- Mid-Western, Far-Western regions have highest prevalence of stunting & wasting and are also most severely food insecure
- Poorest households tend to be the most food insecure and have children that are stunting and/or wasted
- Reliance on food purchases during lean seasons when food prices are high, compounds or exacerbates chronic food insecurity
Mid-Western, Far-Western regions are most food insecure and also have highest prevalence of stunting & wasting in Nepal

Source: NDHS 2011; Coates et al. (2007)
Poorest households tend to be the most food insecure and have children that are stunted and/or wasted

<table>
<thead>
<tr>
<th>HH food expenditure &gt;75 on food</th>
<th>Q1 (Lowest)</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5 (Highest)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>67%</td>
<td>65%</td>
<td>62%</td>
<td>59%</td>
<td>46%</td>
</tr>
<tr>
<td>Inadequate food consumption (self –perception)</td>
<td>73%</td>
<td>67%</td>
<td>65%</td>
<td>58%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Source: UNICEF, Nepal Thematic Report on Food Security and Nutrition 2013,
Reliance on food purchases during lean seasons when food prices are high, compounds or exacerbates chronic food insecurity

Households consumed the bulk of their own production in the months immediately following the harvest and relied on procured food during other periods, making them particularly vulnerable to food price increases.

Source: UNICEF, Nepal Thematic Report on Food Security and Nutrition 2013,
Health: Services & Environment
Key messages on health practices and trends

- Uptake of skilled antenatal care improving though notable disparities persist between rural and urban women
- The development regions with highest Antenatal coverage also have the lowest prevalence of severe anemia in women aged 15-49 years
- Vitamin A supplementation among children fairly high; among women rates are on the lower side in every region
- Increase access to improved water and sanitation nation wide, however a bias towards urban areas
- Little improvement in household water treatment and hardly practiced in rural households
- Central region has one of the highest prevalence of diarrhea but lowest treatment utilization
Uptake of skilled antenatal care improving though notable disparities persist between rural and urban women

Women receiving ANC from skilled provider drastically increased since 2001 though progress slowed since 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>ANC 1st Trimester</th>
<th>4+ ANC Visits</th>
<th>Skilled ANC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>11.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>43.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>58.3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Better antenatal care practices observed among pregnant women in urban settings (2011)

<table>
<thead>
<tr>
<th>Category</th>
<th>ANC 1st Trimester</th>
<th>4+ ANC Visits</th>
<th>Skilled ANC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>71.8%</td>
<td>87.9%</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>47.7%</td>
<td>16.1%</td>
<td></td>
</tr>
</tbody>
</table>

Source: NDHS 2011
Quality of antenatal care on an upward trend for most of the components

Percentage of women accessing the antenatal care
2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Blood Pressure Taken</th>
<th>Urine Sample Taken</th>
<th>Blood Sample Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>91%</td>
<td>60%</td>
<td>46%</td>
</tr>
<tr>
<td>Central</td>
<td>87%</td>
<td>61%</td>
<td>53%</td>
</tr>
<tr>
<td>Western</td>
<td>84%</td>
<td>58%</td>
<td>48%</td>
</tr>
<tr>
<td>Mid-Western</td>
<td>81%</td>
<td>49%</td>
<td>32%</td>
</tr>
<tr>
<td>Far-Western</td>
<td>88%</td>
<td>38%</td>
<td>35%</td>
</tr>
</tbody>
</table>

*women (15-49 years) for their most recent birth in the past five years

Source: NDHS 2011
The development regions with highest antenatal coverage also have the lowest prevalence of severe anemia in women aged 15-49 years.

Source: NDHS 2011
Regions with higher levels of anaemia among women of child bearing age also have higher levels of anaemia among children

Source: NDHS 2011
Higher impact in the reduction of prevalence of anemia requires even greater coverage of the preventive measures.

Source: NDHS 2011

Percentage of women age 15-49 years

- Took Iron Tablets or Syrup
- Deworming Intestinal Parasital Drugs
- Prevalence of Anemia

Source: NDHS 2011
Despite high deworming coverage among young children, high anaemia levels persist; Level of iron supplementation fairly low.

Source: NDHS 2011
Vitamin A supplementation very high among young children and consistently lower among women post-partum nationwide.
Access to improved water has slightly increased nation-wide with urban-rural gap closing slowly

Source: NDHS 2011
Little improvement in household water treatment and hardly practiced in rural households

Source: NDHS 2011
Access to improved sanitation has increased overall, particularly in urban settings.

Source: NDHS 2011
Central region has one of the highest prevalence of diarrhea but lowest treatment utilization.

- In 2011, less than 10% of children < 5 years old were given ORT for diarrhoea (including zinc and ORS) in 4 out of 5 regions.
- Wide variance in the % of children with diarrhoea who were treated across regions
- Nearly all children with diarrhoea were treated in Far-Western and Eastern regions

Source: NDHS 2011
Basic Causes
Key messages on Basic Causes

- A mother’s level of education generally has an inverse relationship with stunting & wasting levels.
- Wasting and stunting are consistently lower among female-headed households.
- Female-headed households that do not receive remittances are more likely to have stunted children.
- The Dalits, Janajatis have some of the highest rates of stunting, wasting and food comprises the largest part of their expenditure.
The Dalits, Janajatis have some of the highest rates of stunting, wasting and food comprises the largest part of their expenditure.

### Caste, ethnic, religious identity and nutrition outcomes, (2010-11)

<table>
<thead>
<tr>
<th>Households’ Castes</th>
<th>% of populations from these castes spending more than 75% share of expenditure on food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hill &amp; Terai Dalit</td>
<td>39%</td>
</tr>
<tr>
<td>Hill Janajati</td>
<td>28%</td>
</tr>
<tr>
<td>Terai Janajati</td>
<td>25%</td>
</tr>
<tr>
<td>Other</td>
<td>26%</td>
</tr>
<tr>
<td>Hill Chetri</td>
<td>20%</td>
</tr>
<tr>
<td>Terai Middle Caste</td>
<td>20%</td>
</tr>
<tr>
<td>Hill &amp; Terai Brahmin</td>
<td>11%</td>
</tr>
<tr>
<td>Newar</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Nepal Thematic Report on Food Security and Nutrition 2013
A mother’s level of education generally has an inverse relationship with stunting & wasting levels

The prevalence of stunting among mothers with no education is nearly double that of mothers who have completed secondary or higher education.

Wasting is less influenced by the mother’s level of education.

Strong relationship between stunting and mother’s level of education, indicates that greater efforts should be made to keep girls in school longer.

Source: NDHS 2011
Wasting and stunting are consistently lower among female-headed households.
Female-headed households that do not receive remittances are more likely to have stunted children.
Key messages

✔ Nepal is 2% points away from achieving the MDG for prevalence of underweight among under five children; Stunting and wasting are still a challenge

✔ Reduction in severe stunting but severe wasting prevalence shows no improvement

✔ Central region of Nepal has the largest number of stunted and wasted children

✔ Mid-Western, Far-Western regions have high prevalence of stunting & wasting and incidentally are also most severely food insecure

✔ Central region has the lowest % of breastfeeding initiation within one hour birth and lowest adherence to 3 IYCF feeding practices

✔ Central region has one of the highest prevalence of anemia and diarrhea (in children aged 6-59 months)