Multi-sectoral Nutrition Overview

A compilation of materials from selected countries

August 2013

UN Nutrition

Last updated in September 2023

Telling the ‘nutrition story’

The complete (multi-sectoral) story –

in a way that connects the dots,

captures the attention of decision-makers,

appeals to technical practitioners,

fosters consensus among diverse stakeholders

on the nutrition issues of the country,

and ultimately, prompts action.

PREFACE

Many of the highlights included in this booklet were emerging materials that had yet to be discussed in-depth and validated in-country.

The process of establishing consensus among partners is equally important as the outputs of analytical exercises, such as the Multi-sectoral Nutrition Overview**.**

1: BASIC NUTRITION TRENDS

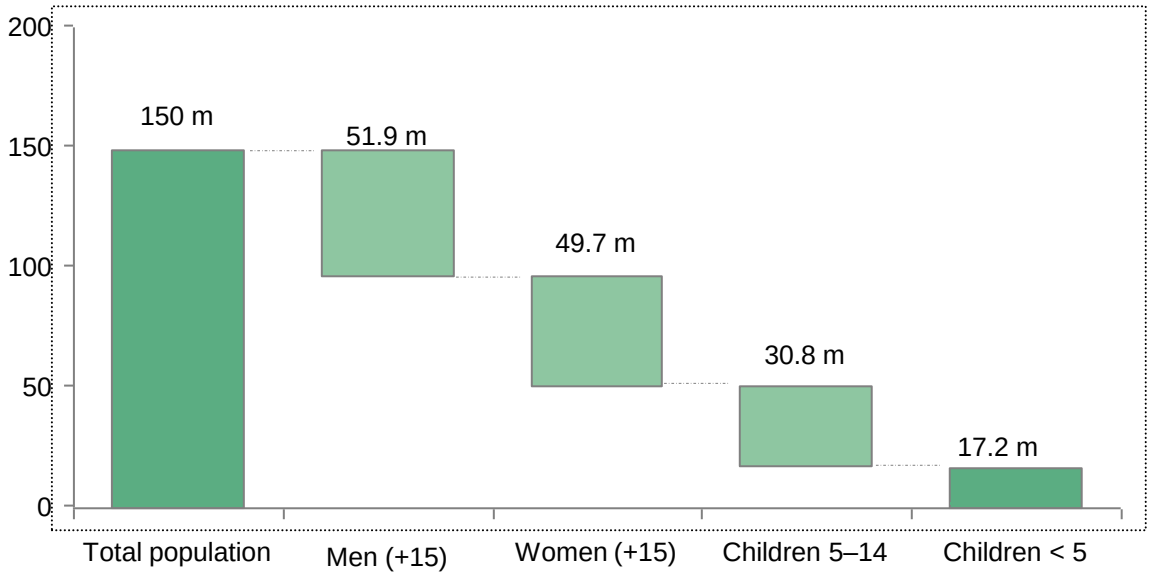
Stunting, wasting, underweight & micronutrient deficiency disorders

Alarming levels and numbers of underweight, wasted and stunted children 6-59 months in Bangladesh

Looking at the demographics through the nutrition lens

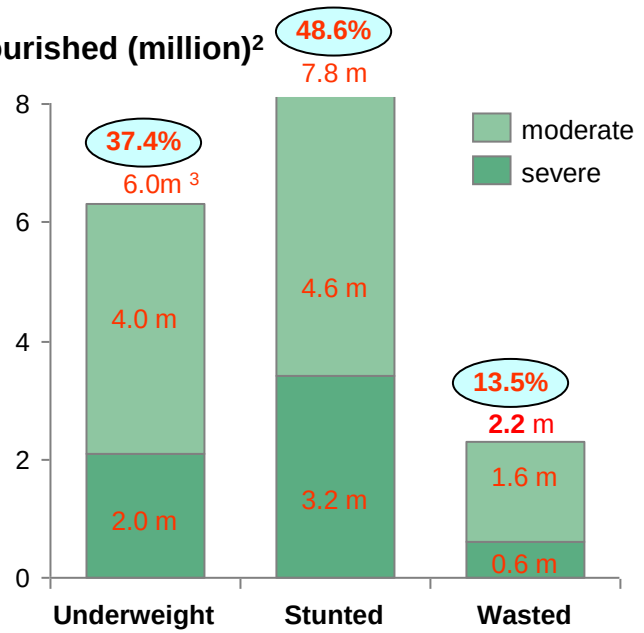
Demographic breakdown

Bangladesh population (million)[1]



Types of undernutrition in children 6-59 months[4]

Undernourished (million)[2]

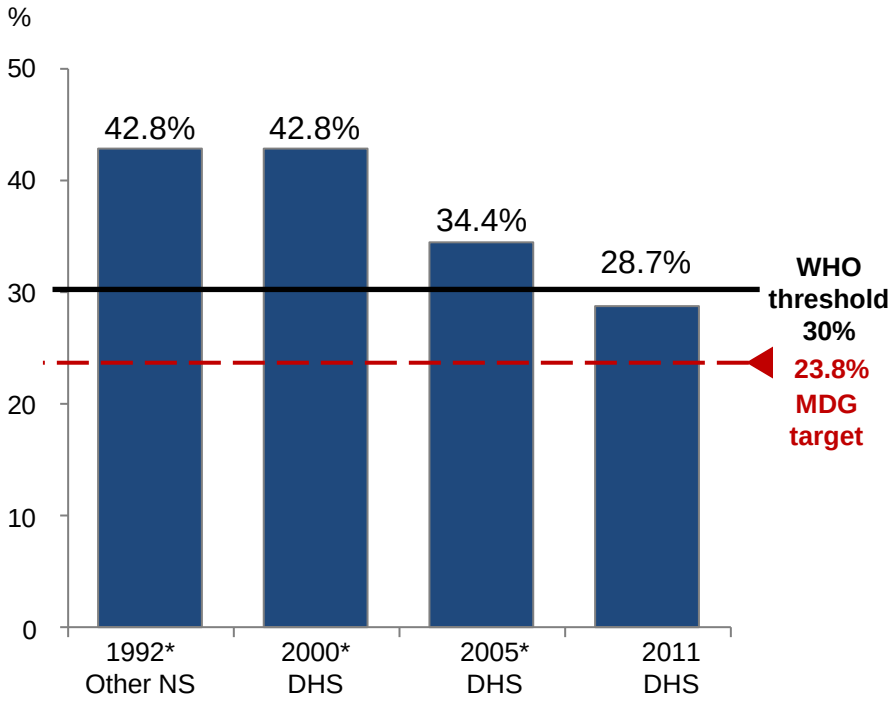


1.BBS Population Census 2001, BBS (Nationwide projection) 2010
2.HFSNA 2009 (WHO standard 2006); 3. Approximately 8 million children (<5 y) are underweight according to NCHS/CDC/WHP 1977
4. Prevalence of under-nutrition is higher among the children of 6 -23 months due to poor quantity & quality of feeding practices, 10.8% of total population are the children of 6-59 months age group (HFSNA 2009)

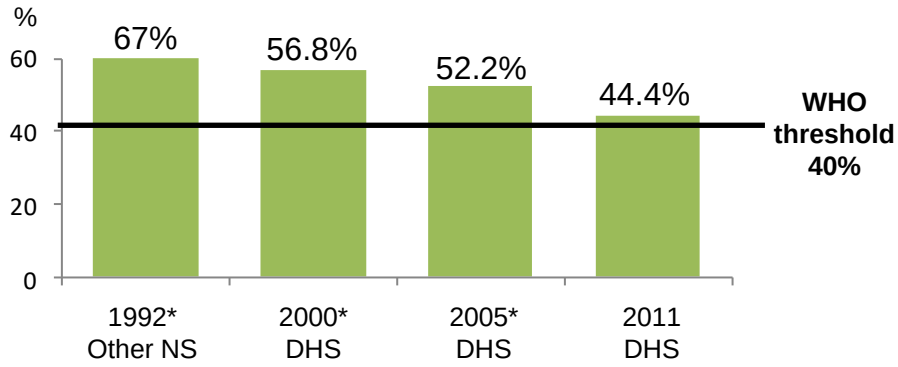
Levels of child undernutrition have been dropping in Ethiopia since 2005 with considerable progress in underweight and stunting

Summarizing anthropometric trends over time, and measuring against MDG1 target 2 & 'critical' population thresholds

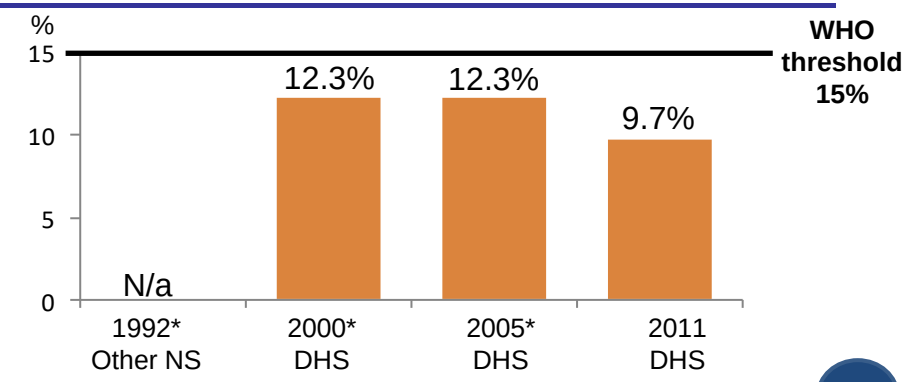
Underweight children <5



Stunted children <5



Wasted children <5



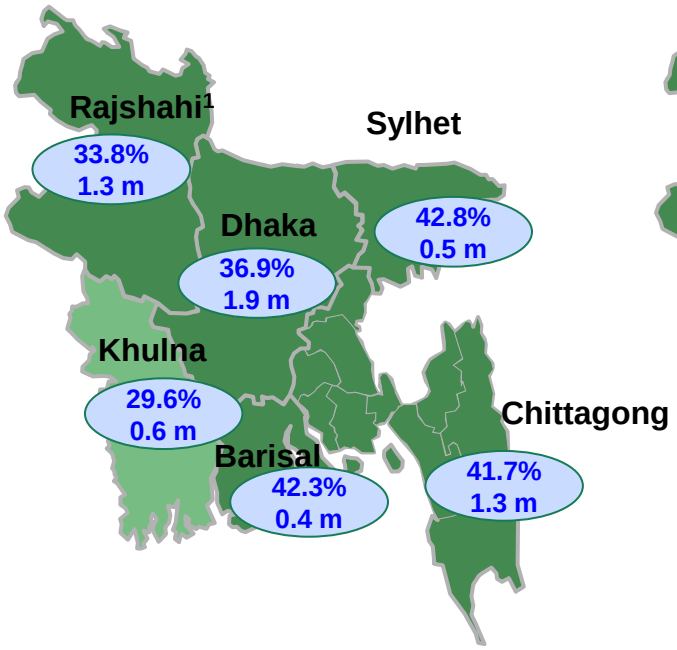
*Note: Prevalence recalculated using 2006 WHO growth standards

Source: DHS (2011); DHS (2005); DHS (2000); Other NS (1992); WHO Conversion tool from NCHS reference into estimates based on the WHO Child Growth Standards

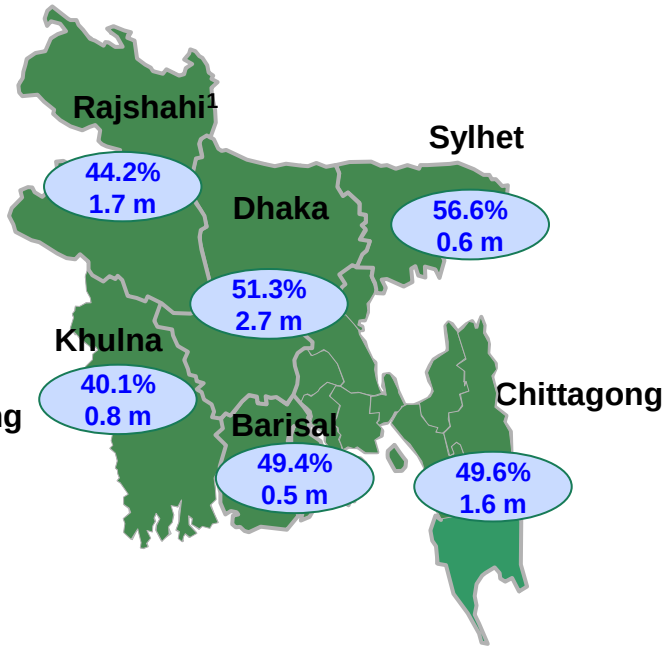
High prevalence of all types of undernutrition throughout Bangladesh

Comparing prevalence to absolute numbers by region

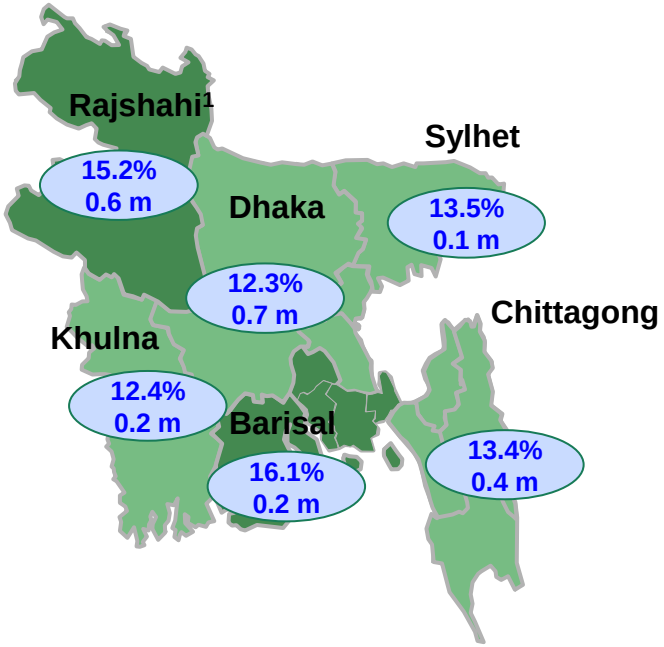
Underweight (0-59 months)



Stunting (0- 59 months)



Wasting (6-59 months)



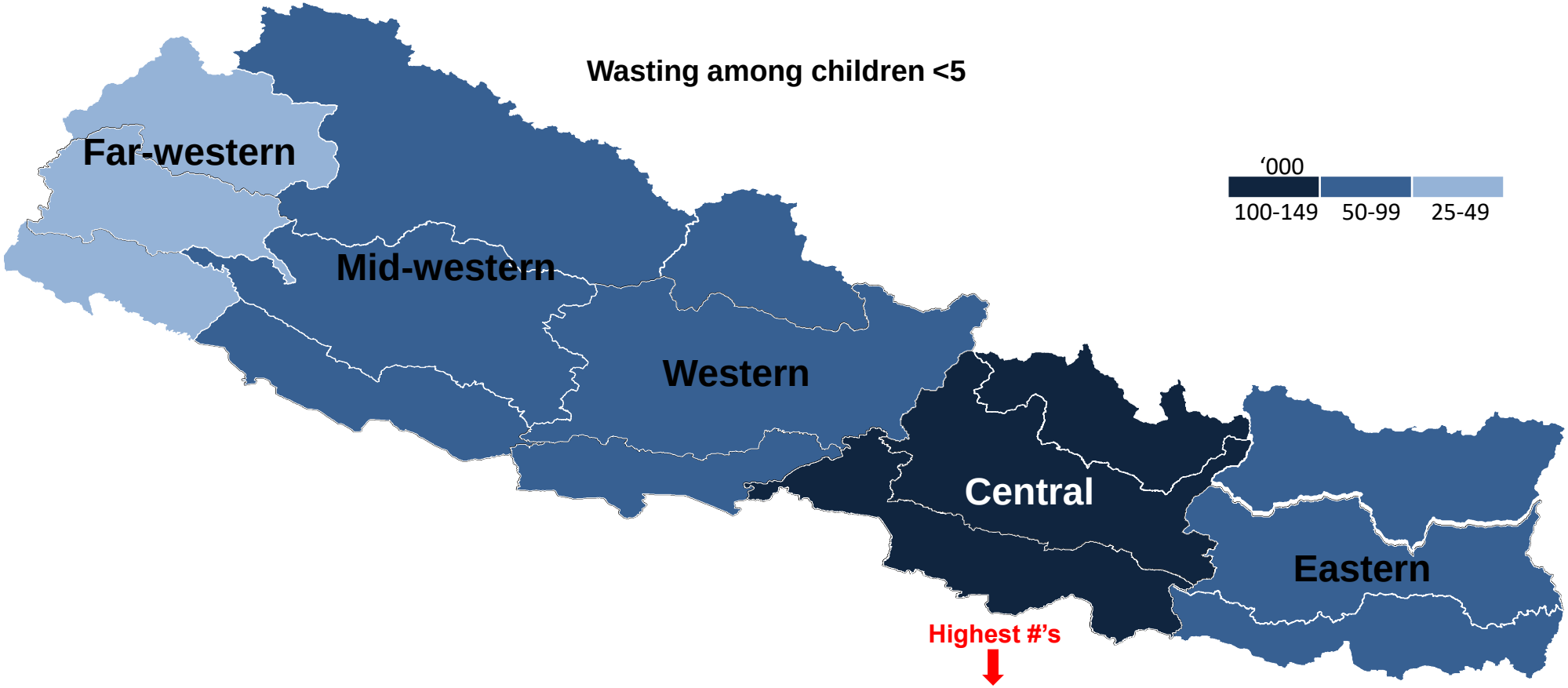
WHO Prevalence Situation Classification (1994)

Very high
High
Medium
Low

Sources: HFSNA 2009 (WHO 2006) and BBS population projection 2010

Highest prevalence of wasting in Eastern Terai, though largest number of wasted children found in Central Region of Nepal

Emphasizing the need to consider both prevalence and absolute numbers to inform prioritisation exercises



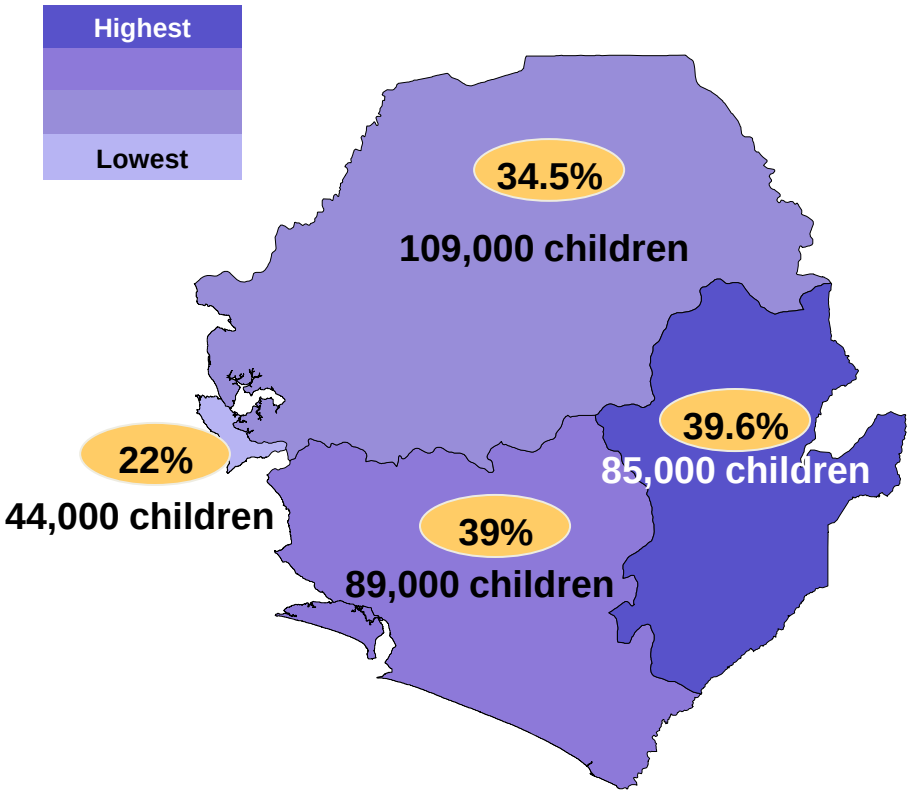
Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu

Largest numbers of malnourished children in Northern region but increasing in Southern and Eastern regions of Sierra Leone

Highlighting changes in stunting prevalence in addition to latest relative and absolute numbers

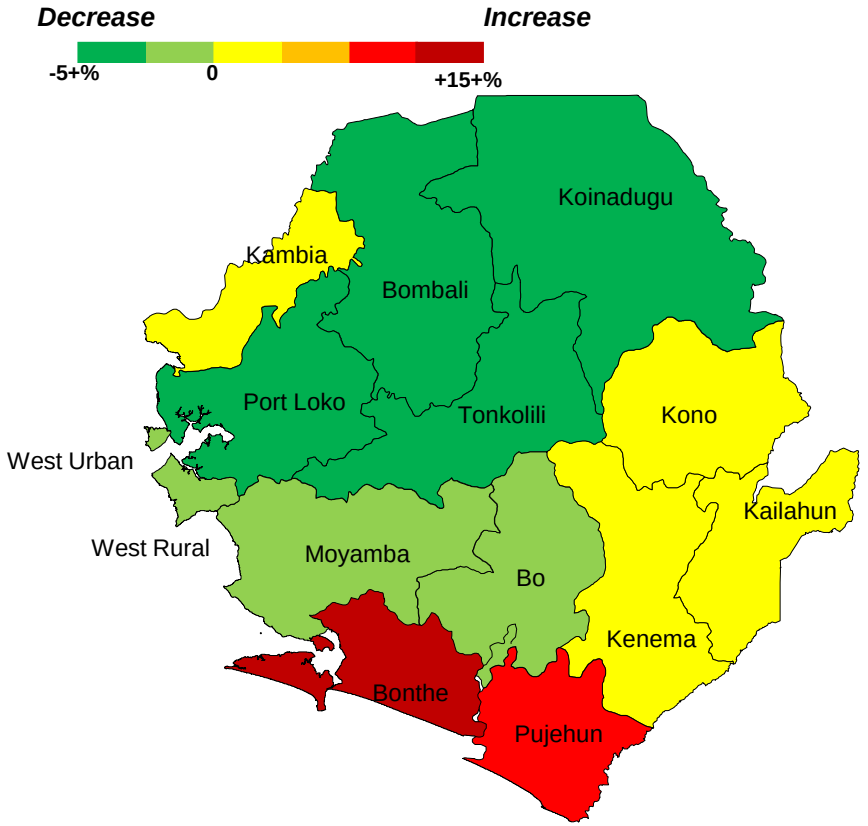
Largest absolute numbers of malnourished children in Northern region…

Stunting prevalence of children 6-59 months, 2010



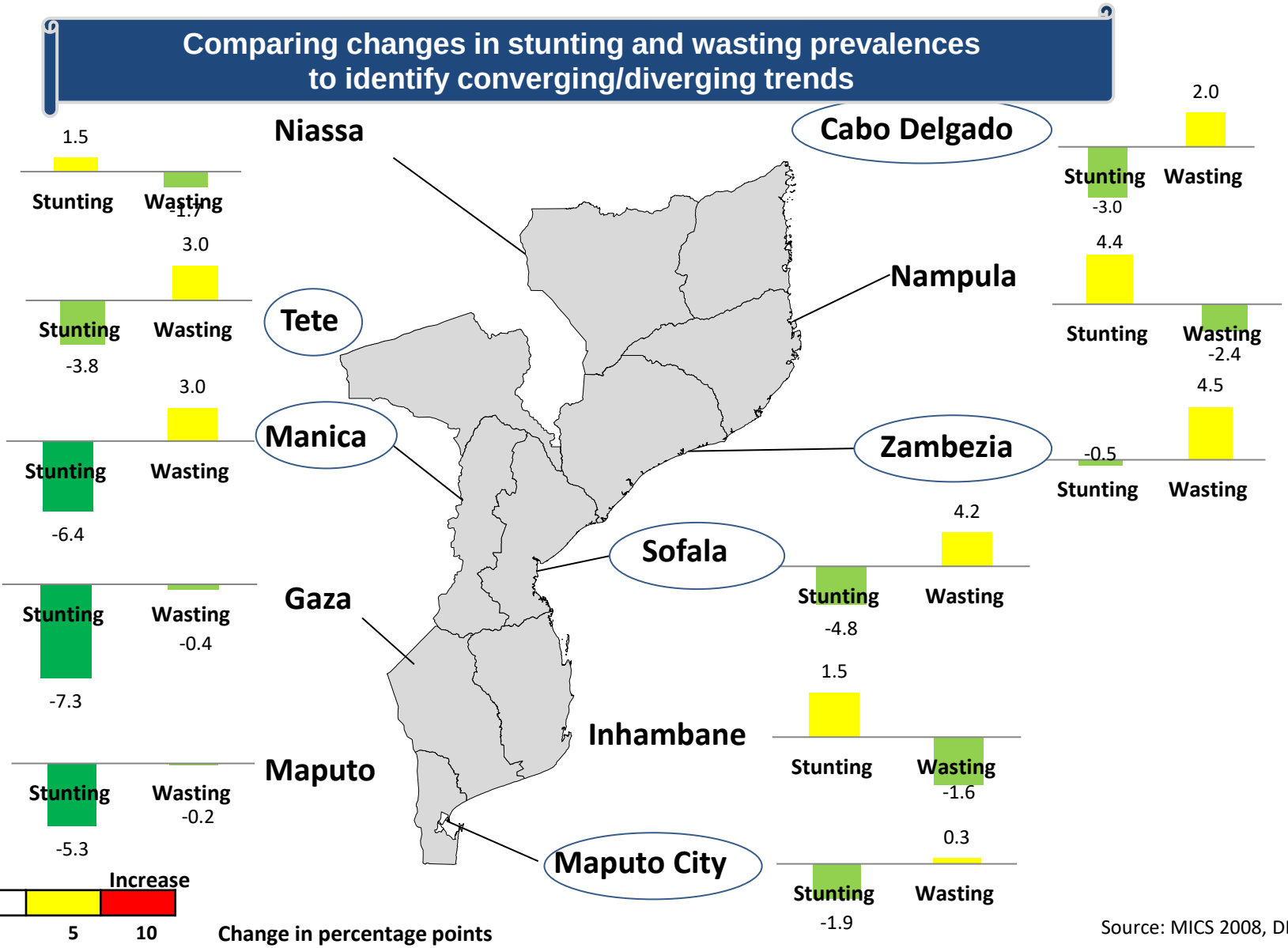
But stunting has decreased in North, while increasing in Southern and Eastern regions

Change in stunting prevalence, 2008 - 2010



Note: SMART 2010 prevalence data provided for children 6-59 months. Absolute numbers for children 0-59 months using SMART 2010 prevalence rates for children 6-59 months.
Source: DHS, 2009; SMART Survey, 2010; REACH analysis.

Despite reductions in stunting from 2008 to 2011, wasting actually increased in many of the same provinces in Mozambique

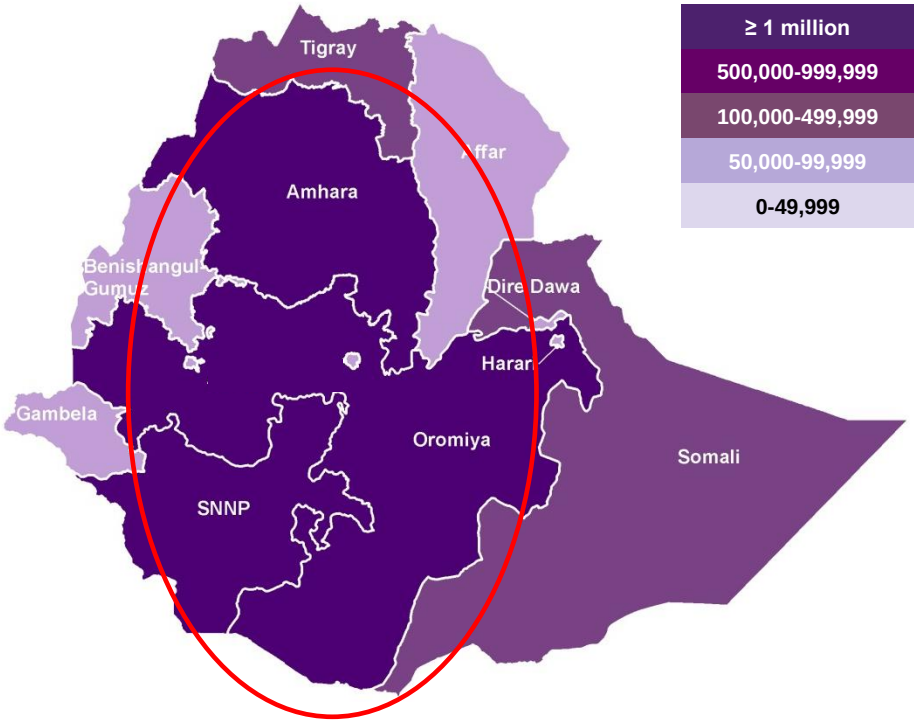


Source: MICS 2008, DHS 2011

In 2011, largest numbers of children with chronic (stunting) and acute (wasting) malnutrition found in the same three regions of Ethiopia

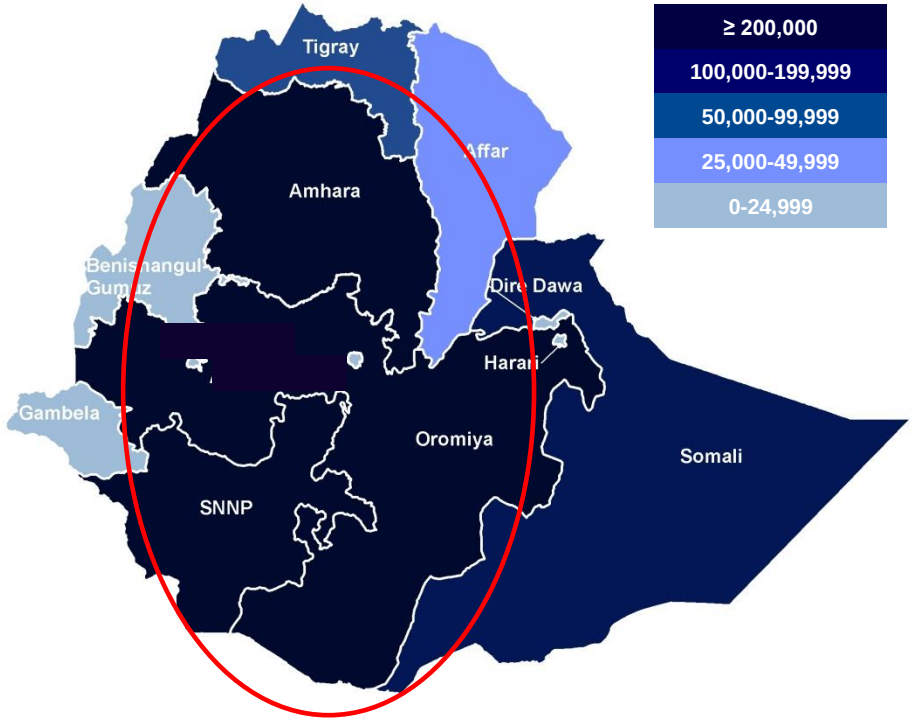
Determining whether areas with the greatest burden of stunted children and wasted children overlap

Stunted children <5 in 2011



~ 4.6 million children

Wasted children <5 in 2011



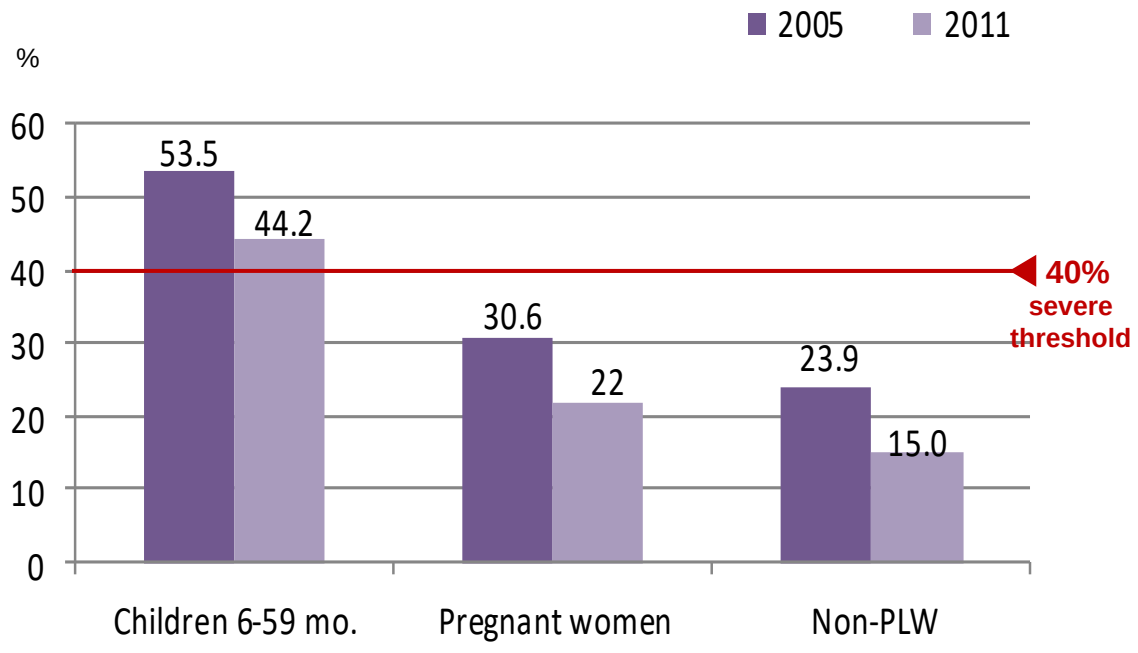
~ 950,000 children

Source: DHS (2011); Ethiopia Census Report (2007); World Population Prospects, The 2010 Revision, Volume II (2011)

In Ethiopia, levels of anaemia are decreasing among both children and women though child anaemia remains a serious public health issue

Taking into account micronutrient deficiency disorders

Anaemia decreasing in under5s & women of child-bearing age



Consequences:

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

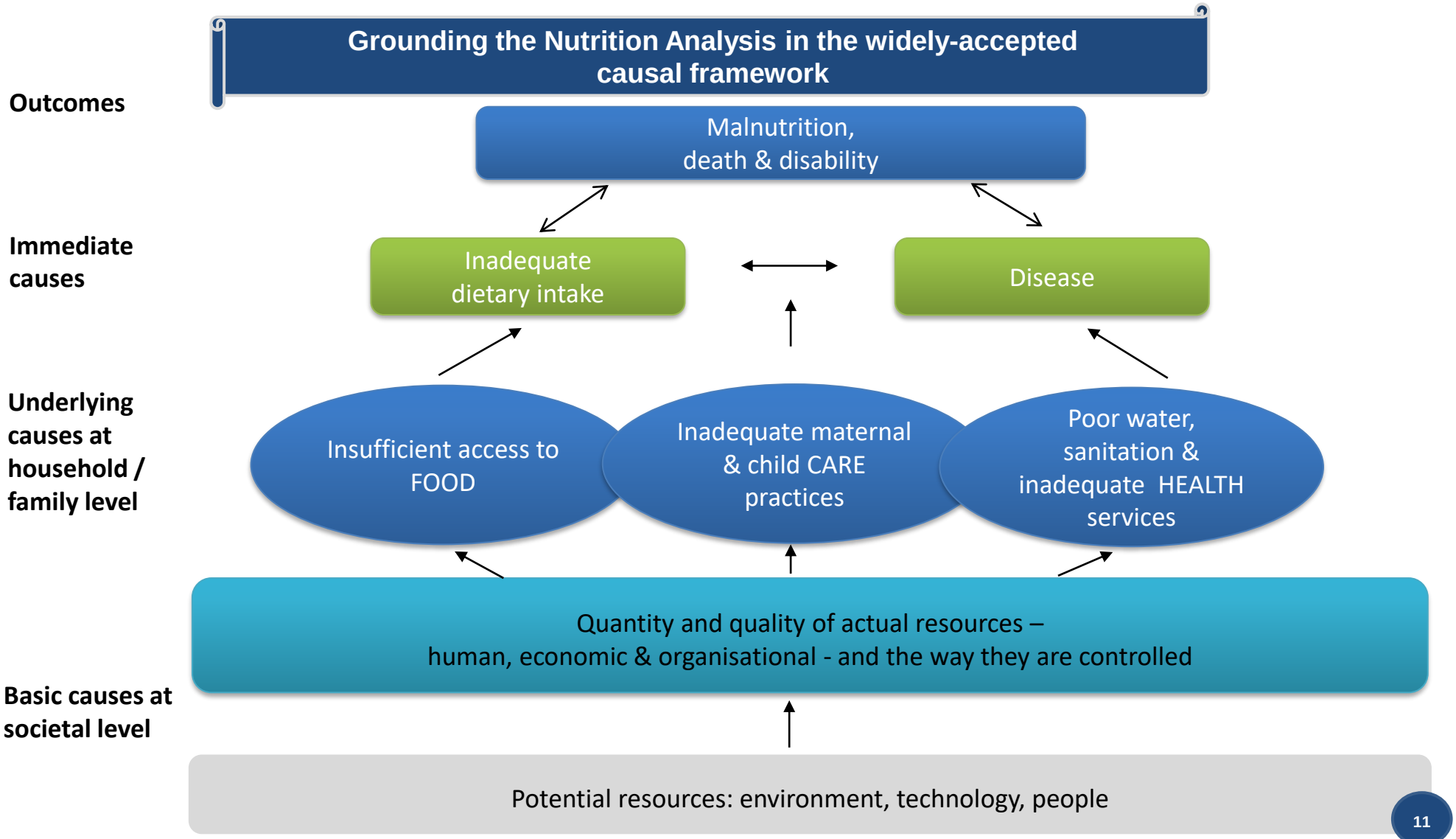
Assessment:

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

Source: DHS (2011); Health Sector Development Programme (HSDP) IV Mid-Term Review presentation, Addis Ababa, 17 May 2013

2: CAUSES OF MALNUTRITION

Conceptual framework for analysing the causes of malnutrition



Source: Adapted from UNICEF

Food Security

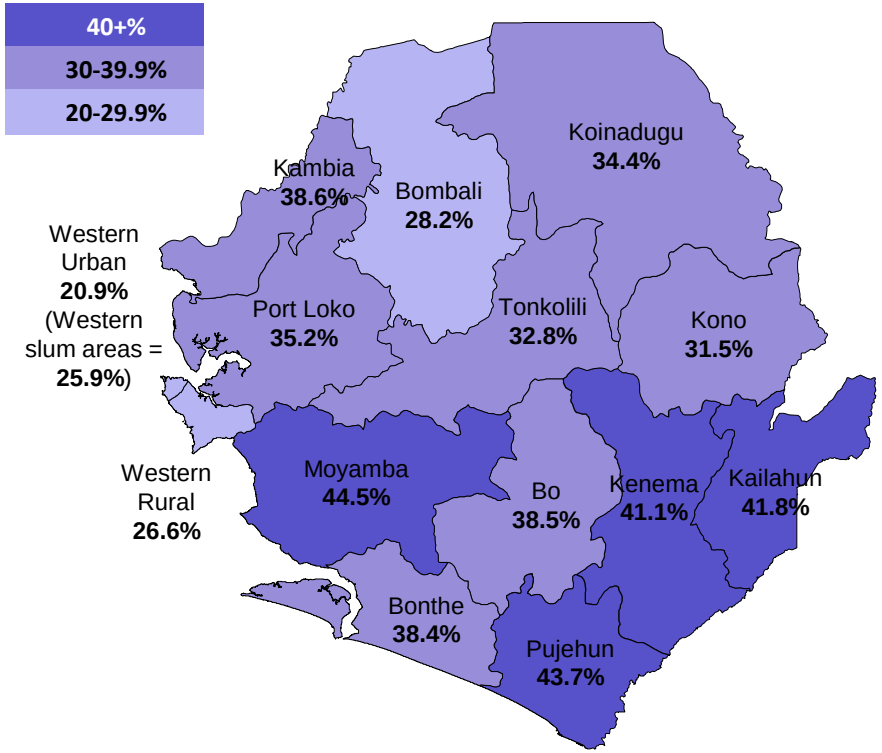
Dietary diversification, food preservation, fortification and livelihoods

Malnutrition and food insecurity patterns are somewhat different by district in Sierra Leone

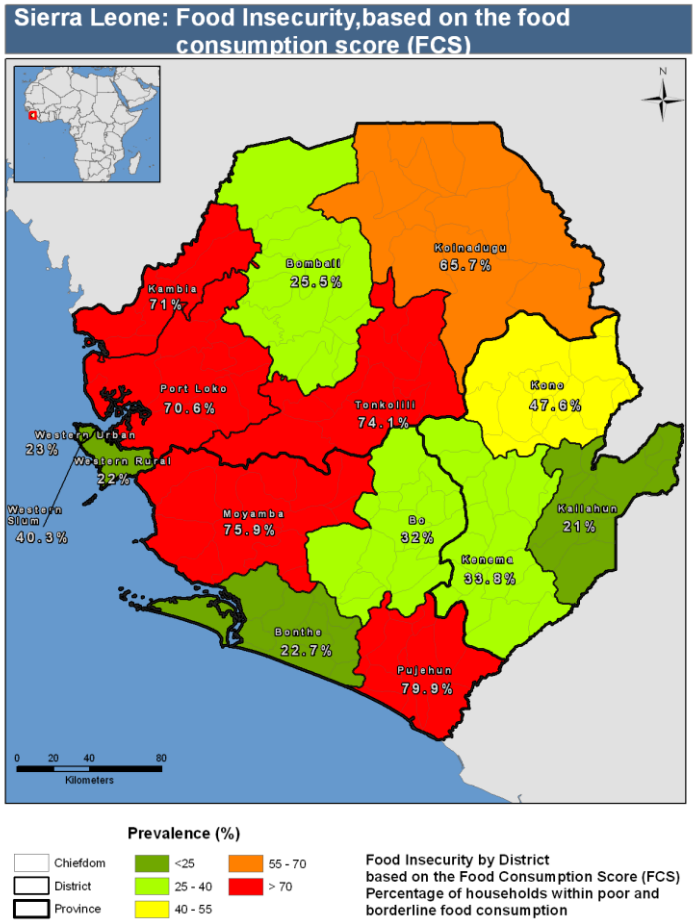
Investigating whether high stunting levels are found in areas with high food insecurity

High rates of stunting in Southern and Eastern regions

Stunting prevalence, children 6-59 months (2010)



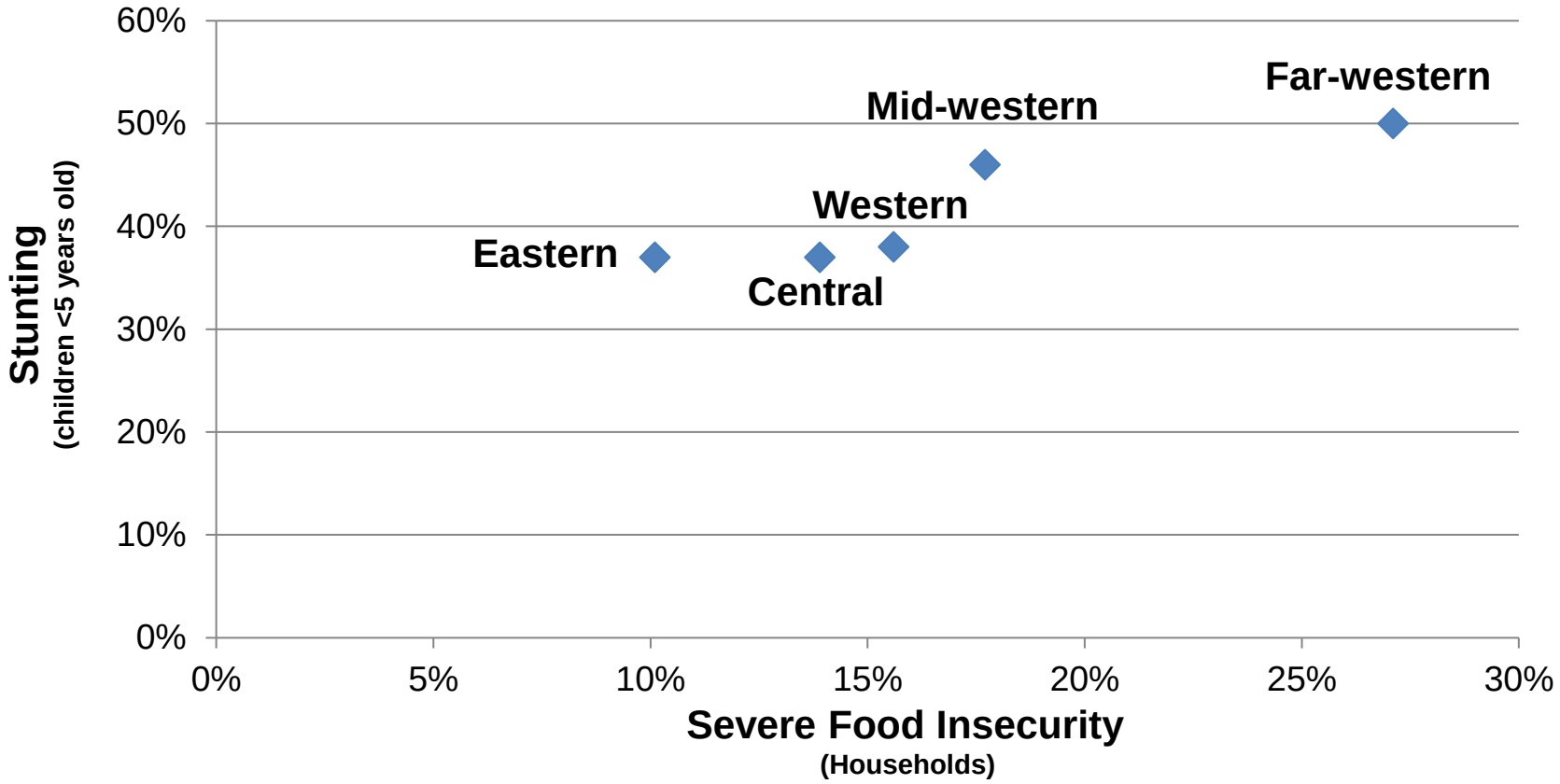
Food insecurity highest in Northern and parts of Southern, but Eastern relatively food secure



Note: SMART anthropometry for children 6-59 months.
Source: DHS, 2009; SMART Survey, 2010; REACH analysis.

Mid-Western, Far-Western regions are most food insecure and also have highest prevalence of stunting & wasting in Nepal

Digging deeper to explore linkages between stunting levels and *severe* food insecurity



Source: NDHS (2011); Coates et al. (2007)

The price of the basic food basket is prohibitively high for over half of Mozambique's population, compromising food access

Raising awareness about the affordability of the basic food basket

Basic food basket per month per person

3 kg rice
9.1 kg maize flour
2.0 kg dry beans
0.5 kg groundnuts
3.5 kg dry fish
0.5 L cooking oil
1.2 kg sugar
0.1 kg salt
3.4 kg fresh vegetables
3.6 kg fruits

Average cost* of a basic food basket for a household with 5 members

6.380,00 Mts/month

Households who buy industrially processed maize and flour

5.556,00 Mts/month

Households who consume maize grain from their own production or buy maize grain on the market and take it to small mills.

*SIMA/MINAG June/July 2009

Household income

55% of the households live under the national poverty line of 18.4 meticais (USD 0.50)

Estimated *daily* income for a household of five living below the national poverty line is 92.0 meticais

Estimated *monthly* income for the population living under the national poverty line is 2,760 meticais

The price of the basic food basket for a household is nearly double their total monthly income, calling for social protection measures

Source: SETSAN 2009, Inquérito ao Orçamento Familiar 2008/2009

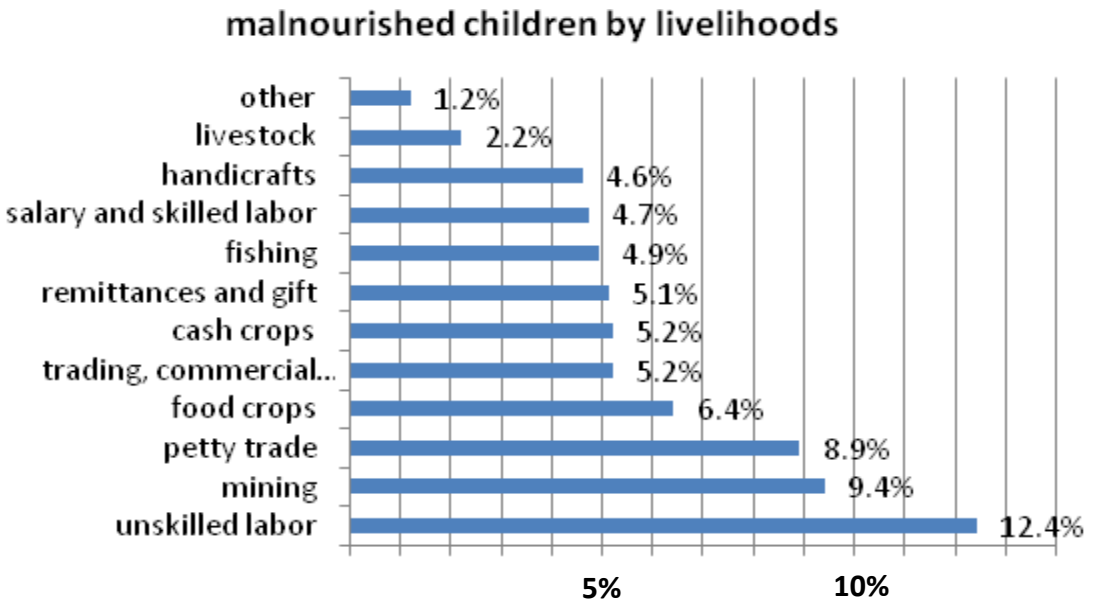
In Sierra Leone, income levels and livelihoods affect households' food security and nutritional status

Factoring in livelihoods when reviewing nutritional status

Links between food security and income

Food consumption score	Annual household income	
	Mean	Median
Poor	3,486,731	2,200,000
Borderline	4,082,511	3,000,000
Acceptable	7,434,464	4,100,000

Links between nutritional status and livelihood



Source: CFSVA, 2011

Women involved farming systems but face many challenges to access resources in Sierra Leone

Profiling gender issues in relation to food systems, among other factors

Time constraints:
- Main reason women do not join farmers organisation due to lack of time
- Insufficient time for activities such as weeding affects productivity and yields
- Time-consuming manual post-harvest handling and processing activities but limited access to labour-saving technologies

Low levels of education and limited financial literacy inhibit women from engaging in marketing activities, accessing credit

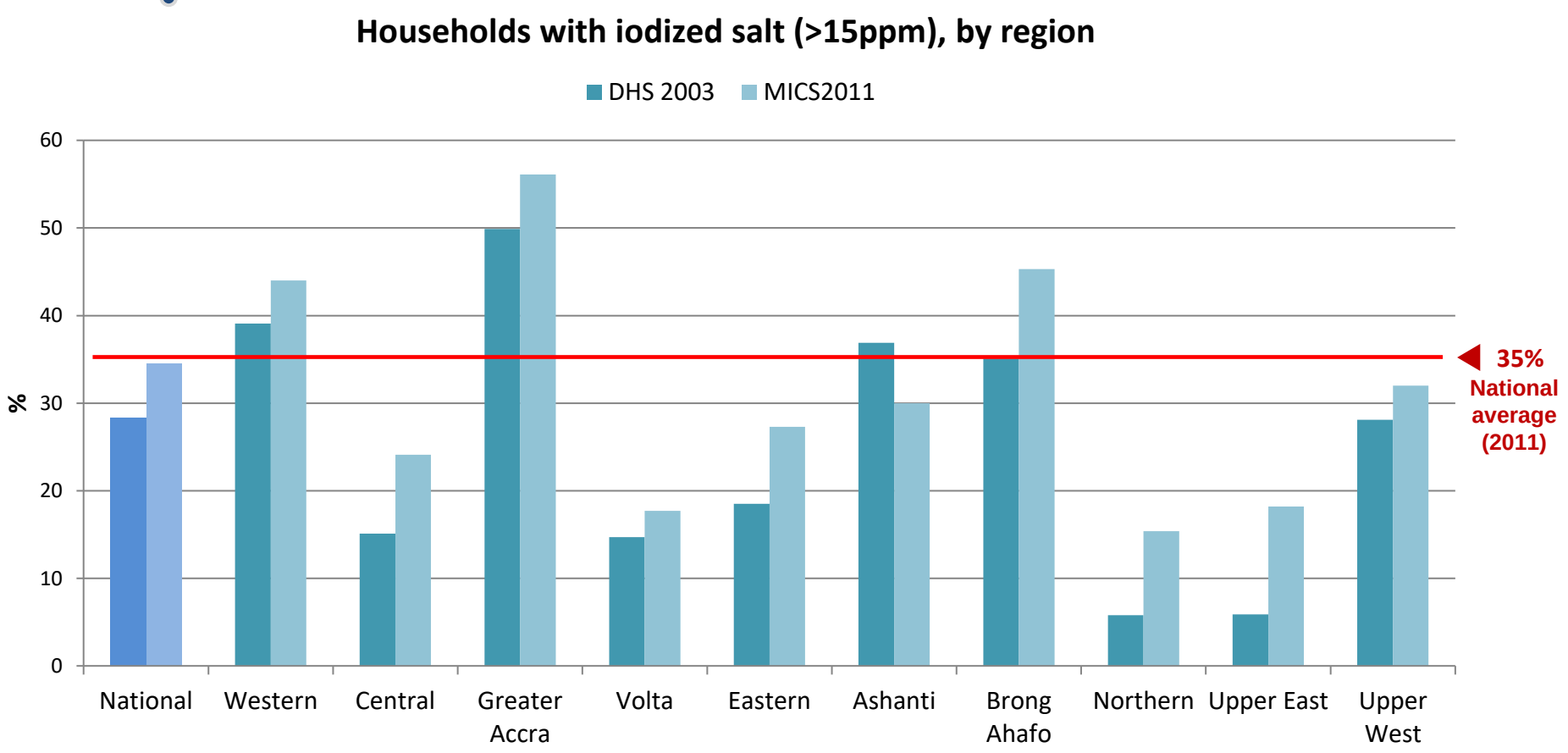
Women often have to go through men to access land, negotiate prices and deals, or technology/inputs

Limited influence or control of household resources:
- Women have little control over income, particularly for high-value crops
- Many women find additional income generating activities or sell unprocessed rice or other products at low prices to generate 'fast cash' to meet daily needs

Source: 'Regional capacity-building and knowledge management for gender equality: FAO/IFAD grant programme,' FAO, IFAD, 2011; SLARI research, 2011.

Household use of iodized salt is on the rise, but on average, only 35% of Ghanaian households consume adequately iodised salt

Taking stock of food fortification, including universal salt iodisation



Northern, Volta and Upper East regions with greatest room for improvement.

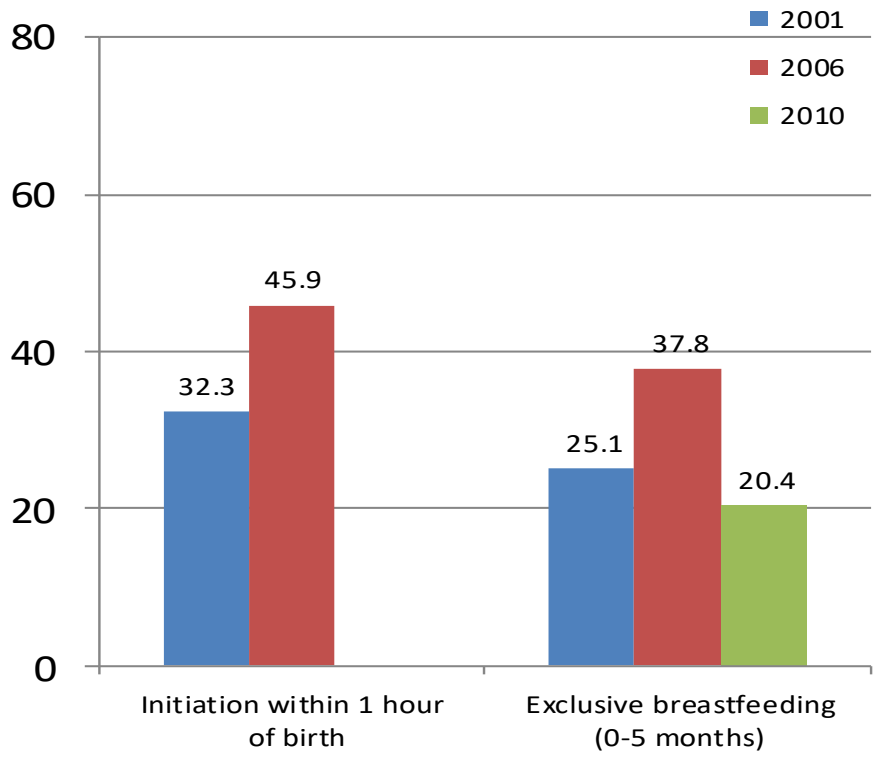
Care Practices

Exclusive breastfeeding, adequate complementary feeding & personal hygiene

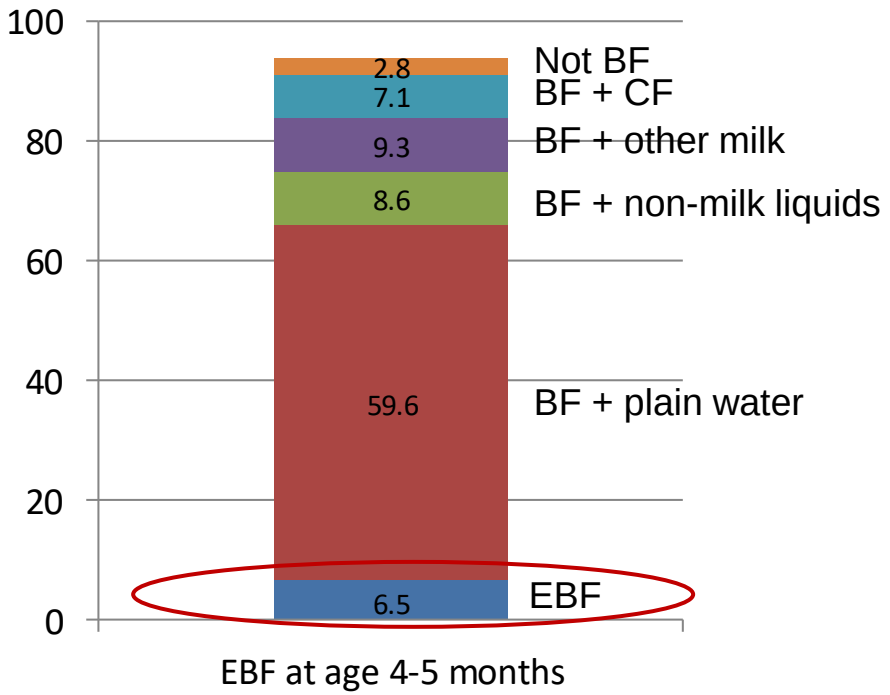
Despite initial improvement in early initiation and exclusive breastfeeding, rates remain low in Mali

Looking at infant feeding trends, particularly early initiation of breastfeeding and exclusive breastfeeding

Fluctuating levels of Exclusive Breastfeeding (EBF) with a sharp decline from 2006 to 2010



In 2010, just 6.5% were EBF at 4-5 months old, with many also receiving other substances, increasing the risk of illness due to contamination

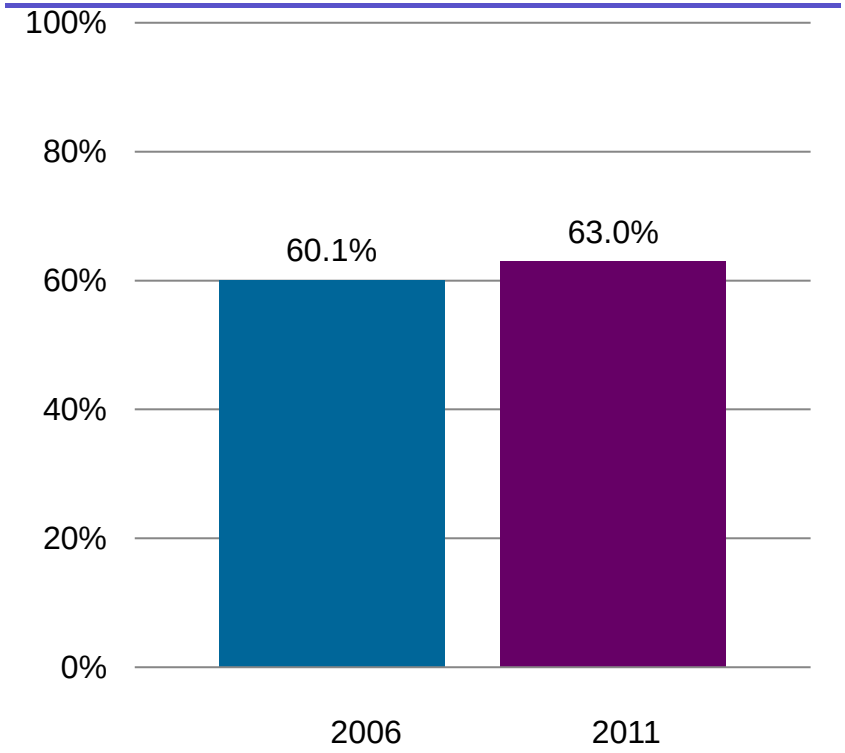


Source: DHS (2001); DHS (2006); MICS (2010).

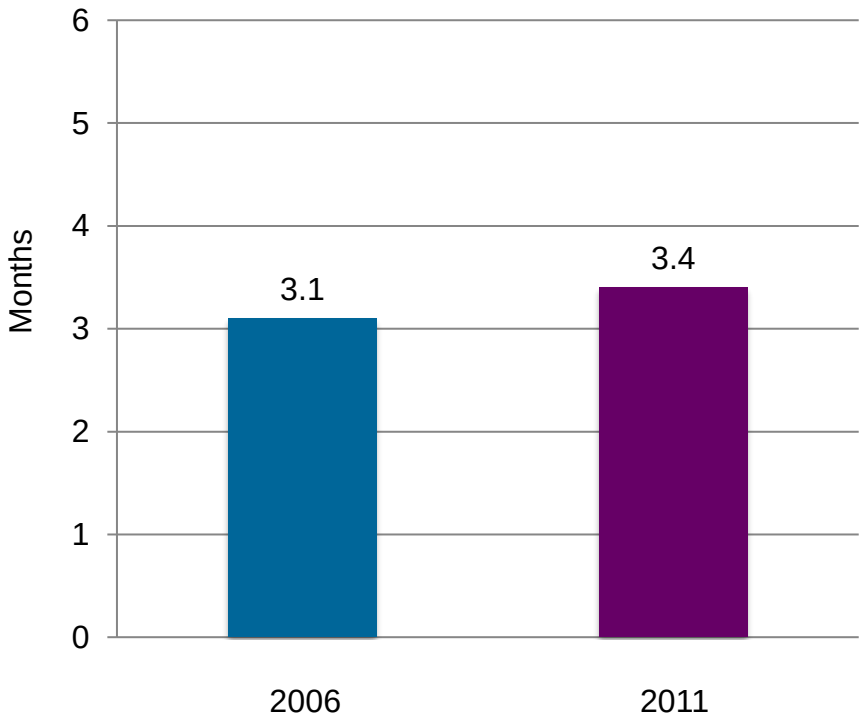
In Uganda, little progress made in exclusive breastfeeding from 2006 to 2011, calling for further inquiry

Acknowledging slow progress and when exclusive breastfeeding typically stops to prompt discussions on barriers and solutions

About 3 out of 5 infants <6 months old are EBF



Infants typically EBF just half of the recommended 6-month period

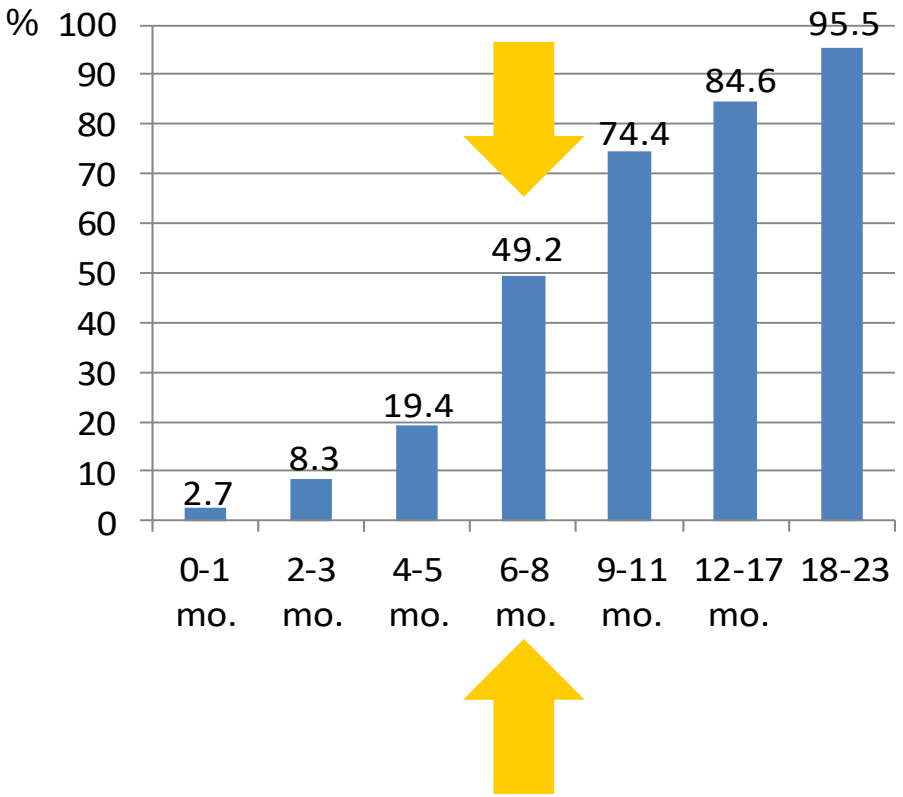


Source: UDHS (2011)

Most children do not receive timely introduction of complementary foods in Ethiopia

Presenting data on the introduction of complementary foods within the context of international guidelines

Complementary feeding practices children 6-23 months (2011)



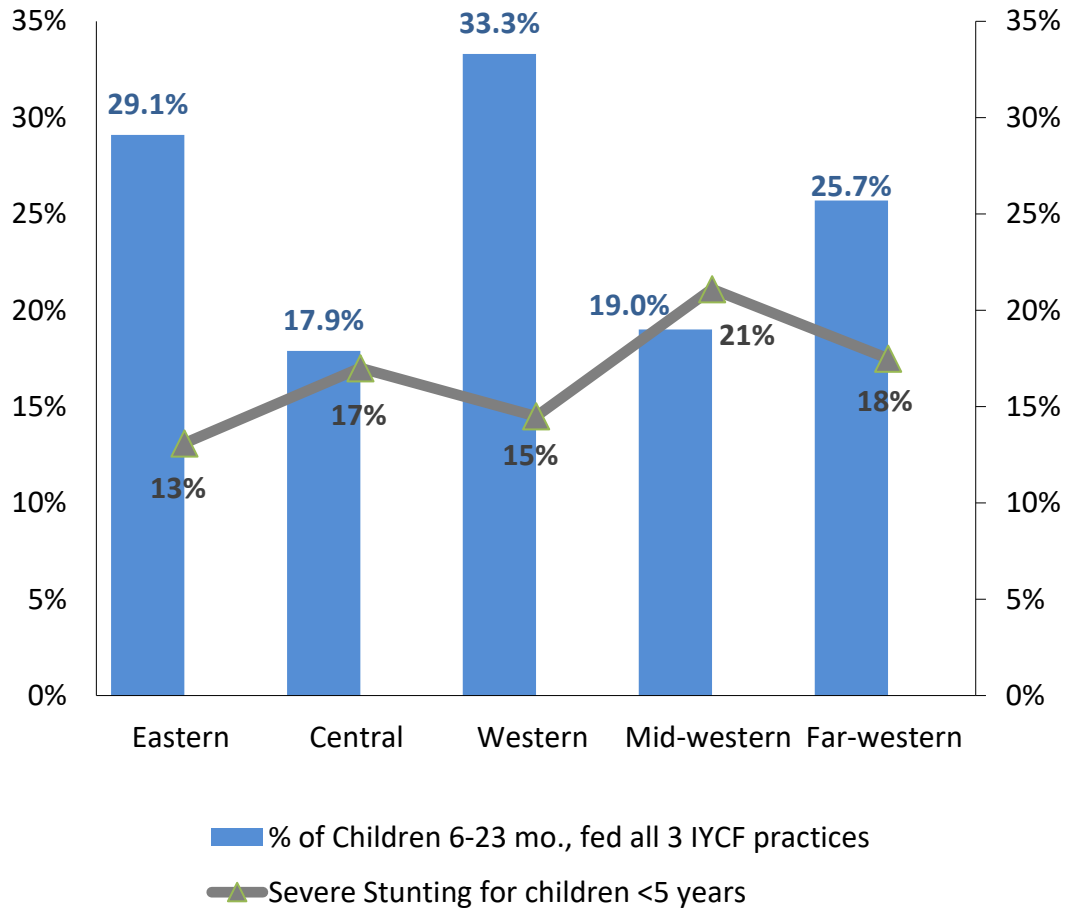
International guidelines promote complementary foods to be introduced at 6 months of age but most children in Ethiopia receive them either too early or late.

- Nearly 20% of children receive complementary foods earlier
- Nearly 50% of children start eating complementary foods later

Source: DHS (2011)

Central and Mid-Western regions of Nepal with *lowest* percentage of children given recommended IYCF practices also had some of *highest* severe stunting levels in 2011

Analyzing IYCF behaviours against nutritional status



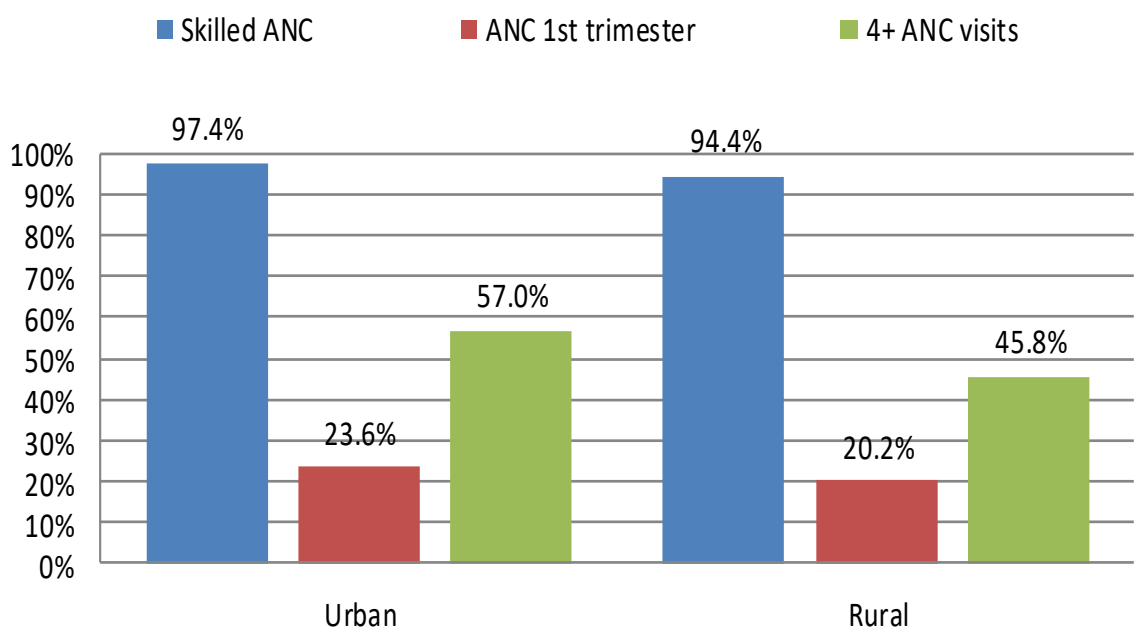
Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu

Health: Services & Environment

Healthcare, micronutrient supplementation, water and sanitation

Pregnant women generally receive skilled antenatal care but start too late and don't complete the full course in both urban and rural areas of Uganda

Recognizing that multiple nutrition actions are provided during ANC visits, and thus rely on quality, timely and uptake of ANC

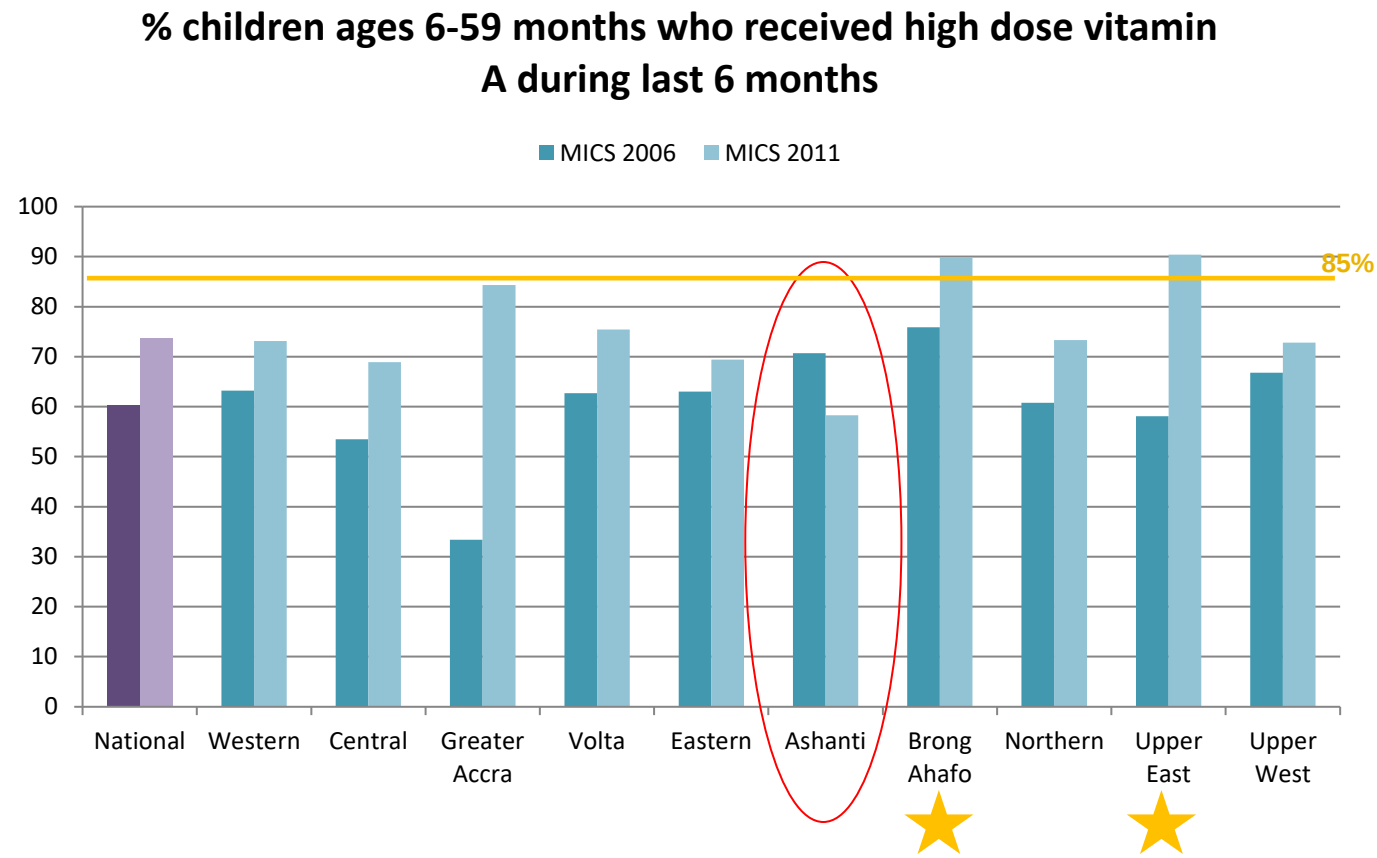


- Uptake same in urban and rural areas
- Most antenatal care provided by skilled provider
- Less than 25% of women seek antenatal care in the first trimester of pregnancy
- About half of women have 4 or more ANC visits, with uptake higher in urban settings

Source: DHS (2011)

All regions in Ghana improved Vitamin A coverage from 2006 to 2011, except Ashanti

Highlighting trends in coverage of Vitamin A supplementation to help achieve scale, where deemed necessary

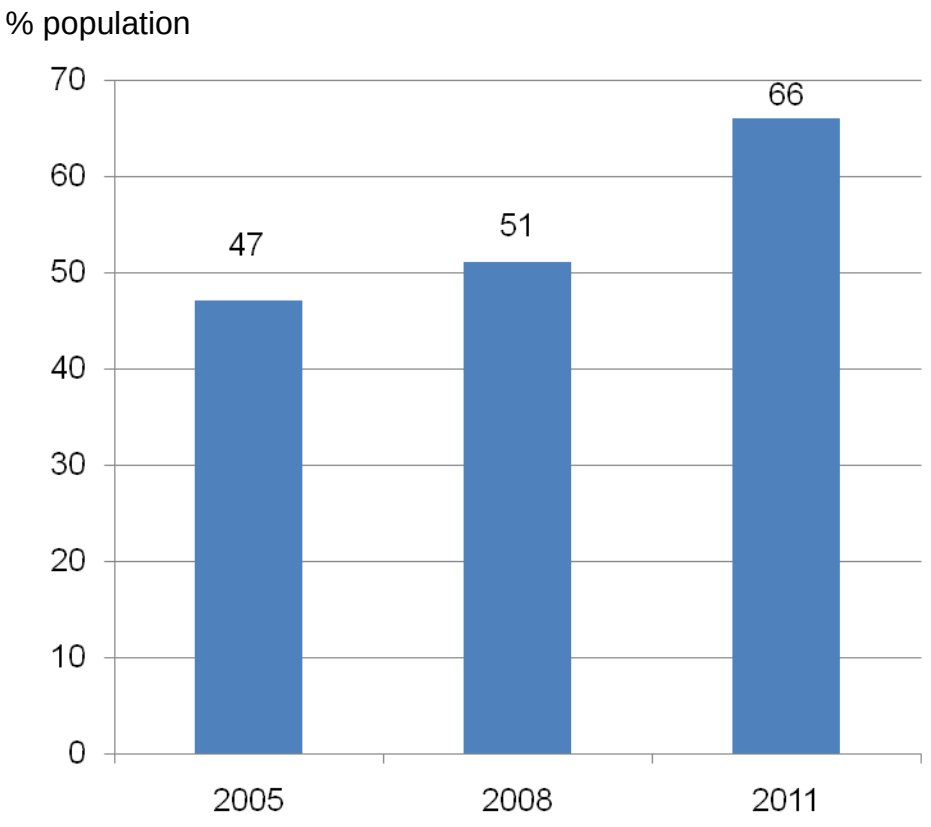


- Uneven progress e.g. substantial increase for Greater Accra and nominal increases in Eastern and Upper West Regions.
- In 2011, 74% of Ghanaian children age 6-59 months received Vitamin A supplement.
- Three regions approaching or have achieved scale in 2011, with Upper East Region and Brong Ahafo reaching 90%

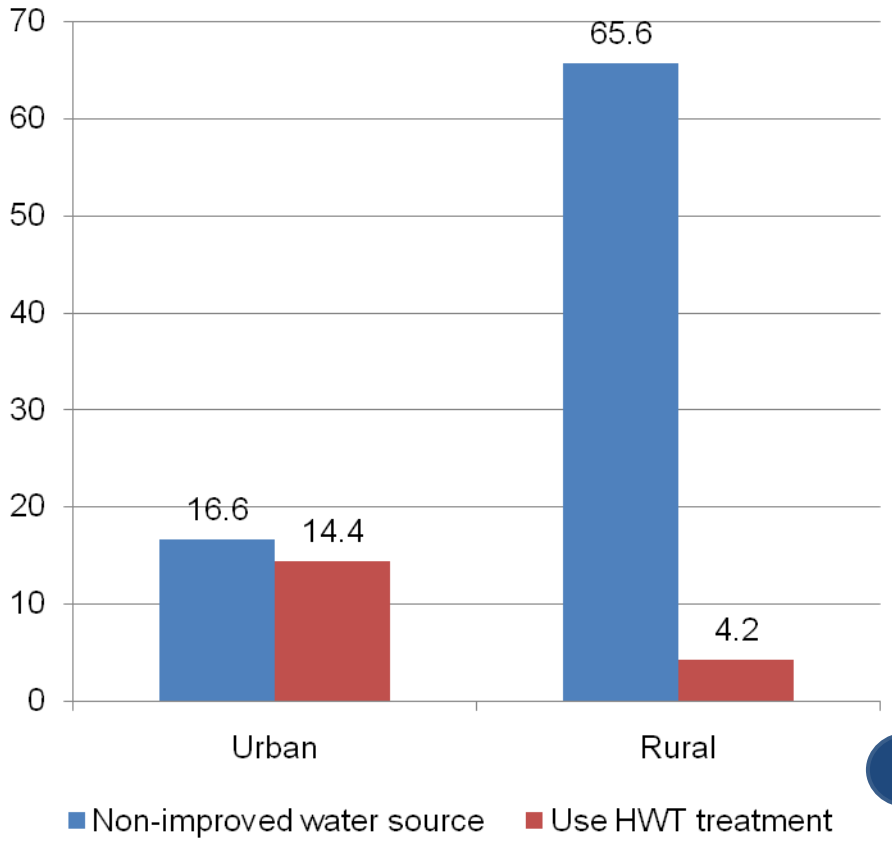
In Sierra Leone, access to improved water has only increased in urban areas, and rural households do not treat water appropriately

Recognizing access to clean water as an important component of addressing undernutrition

Use of an improved drinking water source has gradually improved over the last 6 years



But rural populations still lack access to safe water – Almost no use of HH water treatment methods (2008)

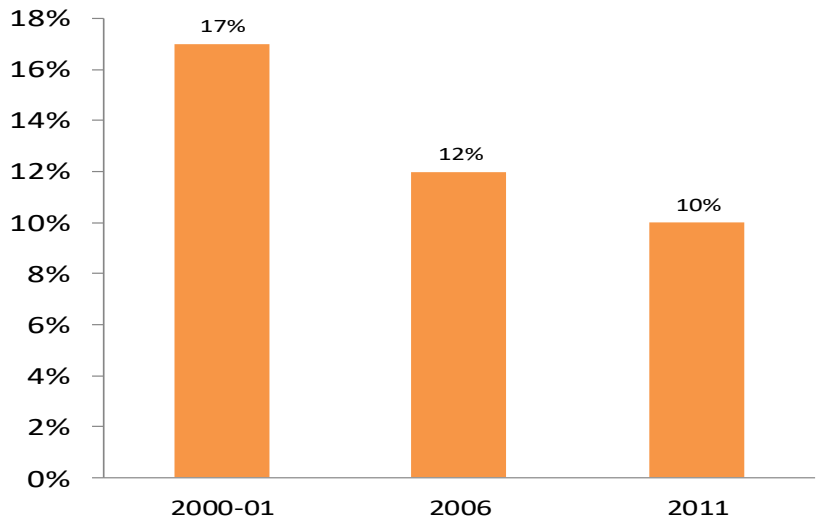


Source: MICS 2005, DHS, 2008, CFSVA 2011;

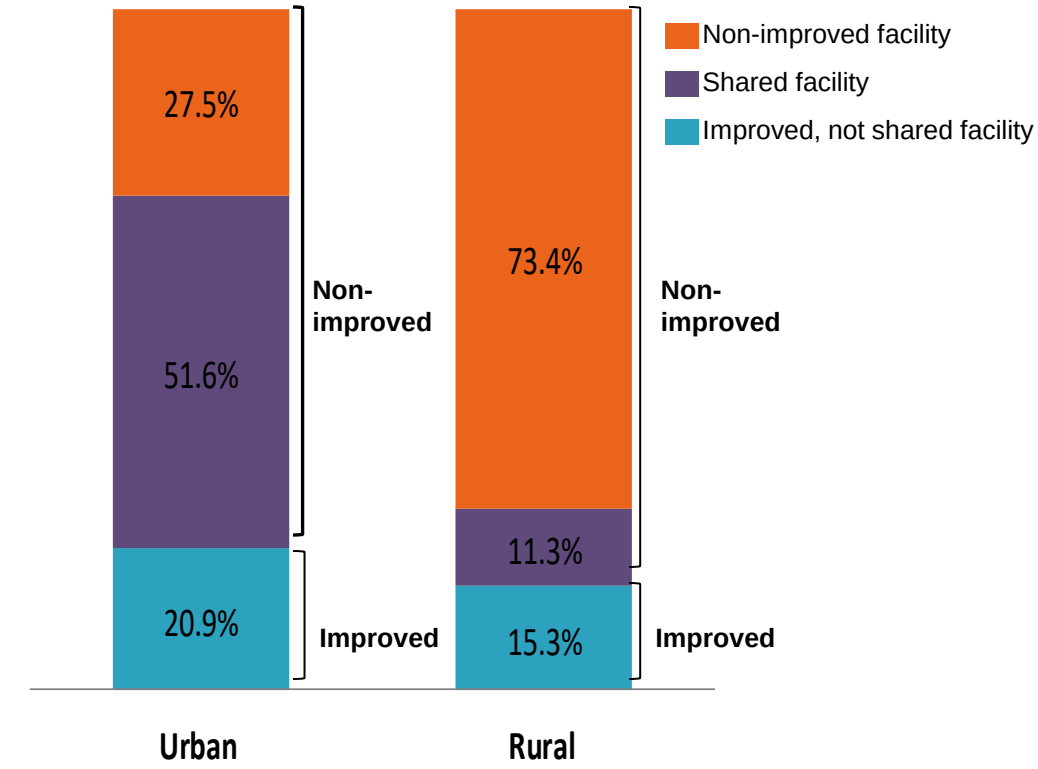
A small proportion of Ugandan HHs have no facility, though access to improved sanitation facilities is low for rural and urban HHs

Including sanitation considerations

Slowing decline in proportion of households with no facility



Vast majority of rural households use non-improved toilet facilities

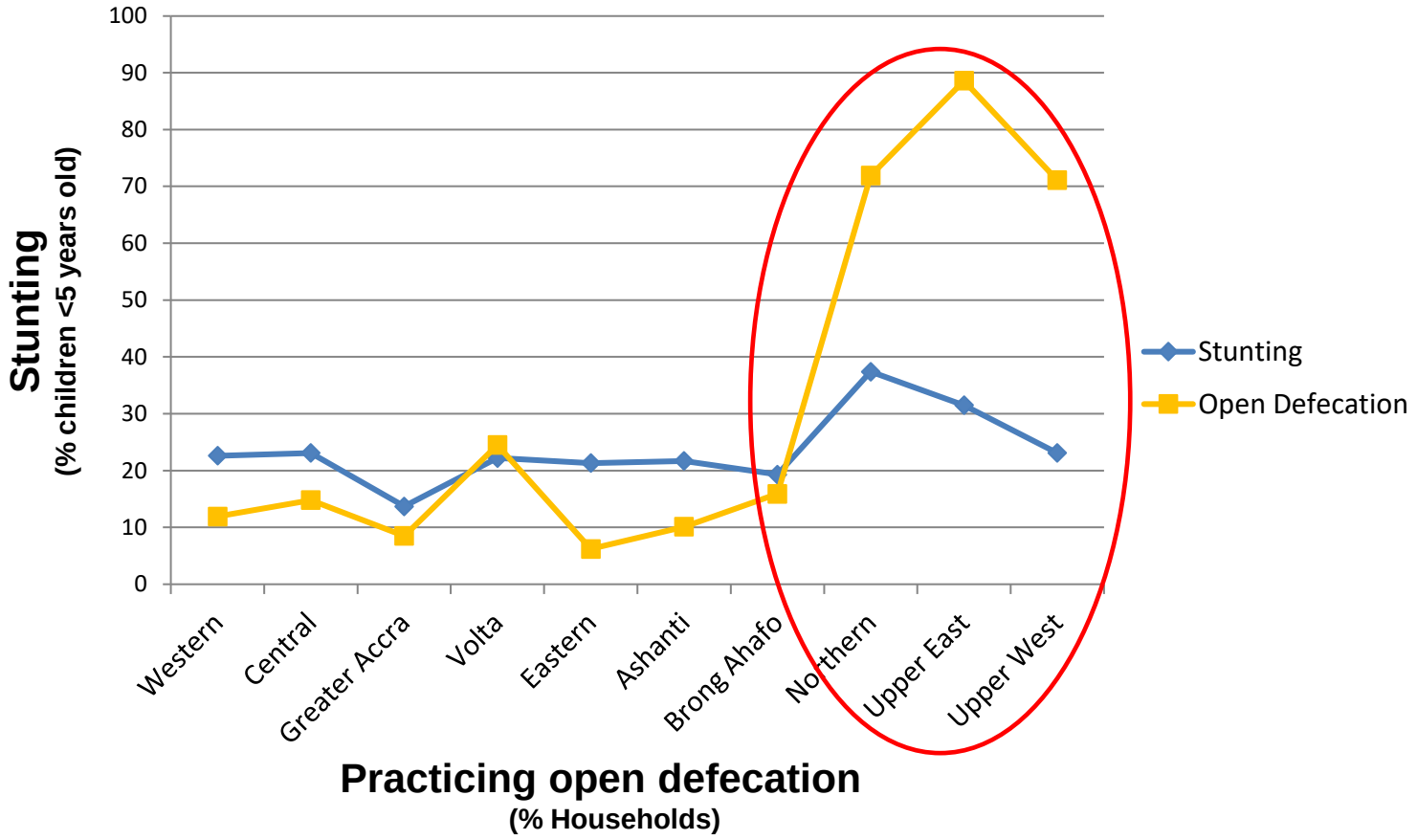


Source: UDHS 2011, 2006

In Ghana, stunting is highest in regions where sanitation facilities are least accessible.

Exploring the links between poor sanitation and stunting

Northern regions widely practice open defecation and have the highest rates of stunting.



Source: MICS (2011)

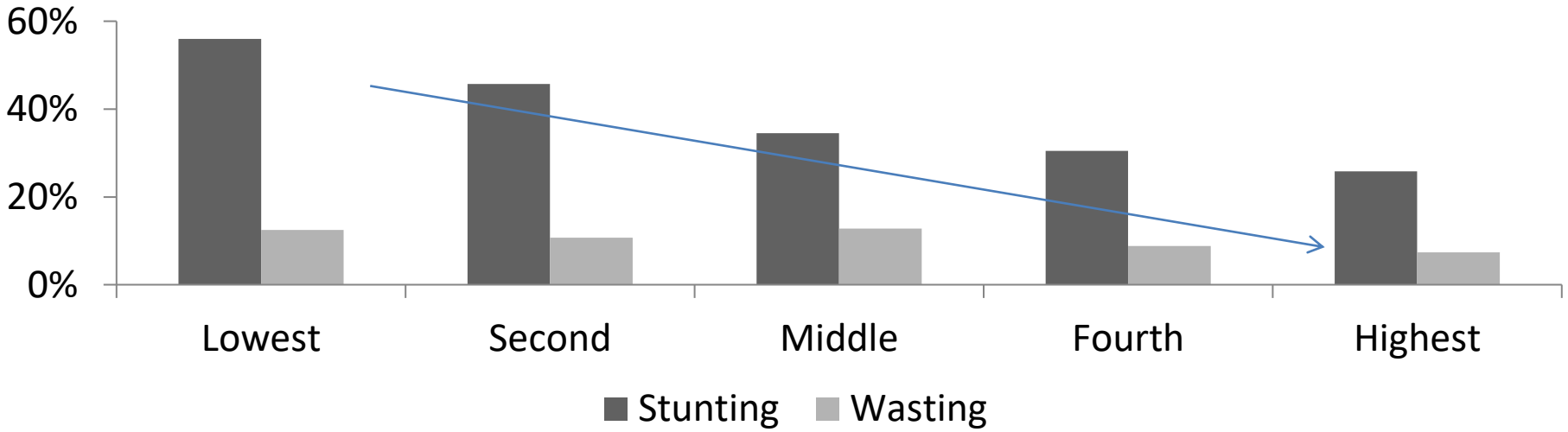
Basic Causes

Poverty, Education and Gender

Nepal's poorest households tend to be the most food insecure and have children that are stunted and/or wasted

Establishing linkages between poverty, food insecurity and undernutrition

	Q1 (Lowest)	Q2	Q3	Q4	Q5 (Highest)
HH food expenditure >75 on food	67%	65%	62%	59%	46%
Inadequate food consumption (self –perception)	73%	67%	65%	58%	40%

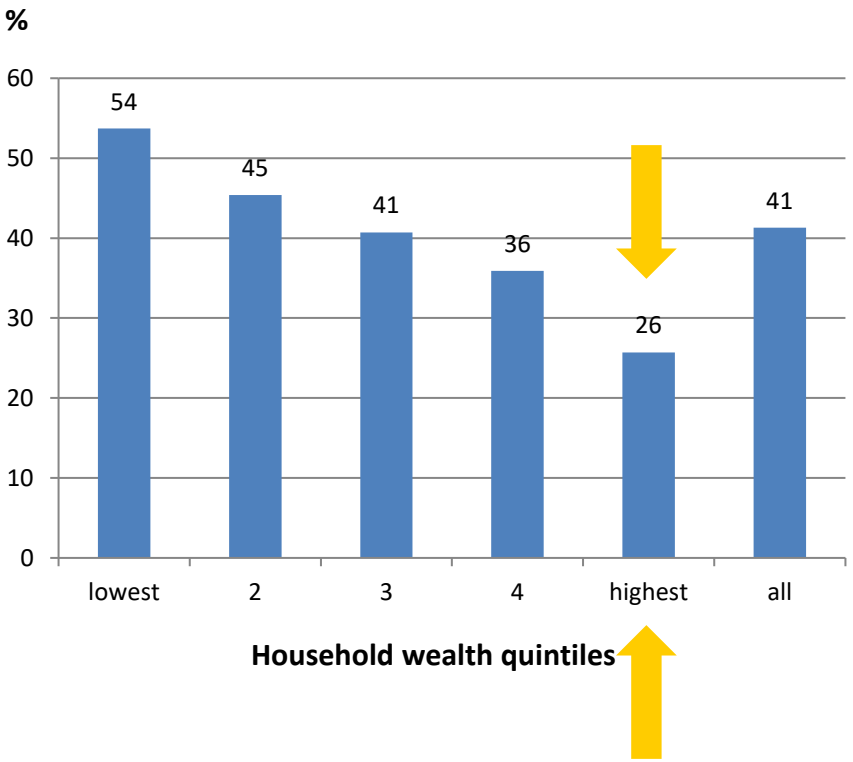


Source: Census 2011 population projection, Estimated Target Population (2011-12), DoHS, Kathmandu

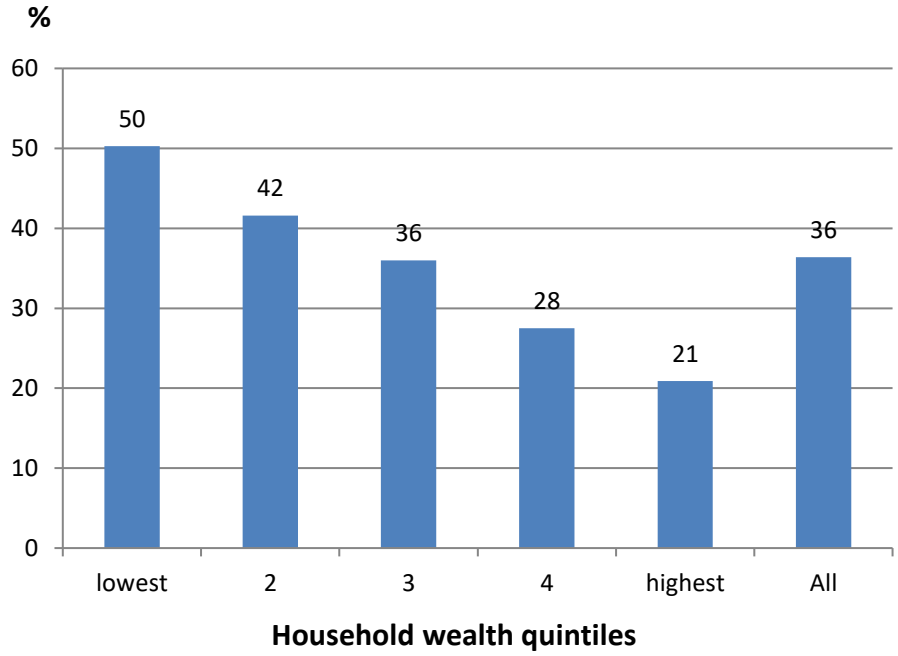
Poverty reduction is not completely solving the problem of undernutrition in Bangladesh: 1 in 4 children in the highest wealth quintile is stunted

Highlighting the need to go beyond poverty reduction and to consider other social and economic development issues when addressing child undernutrition

% of stunted children <5



% of underweight children <5

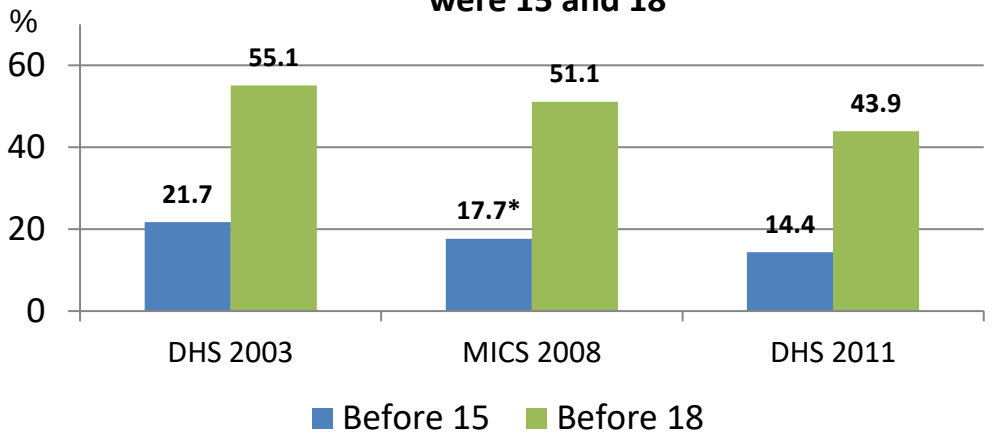


Source: BDHS (2011) using WHO Child Growth Standards

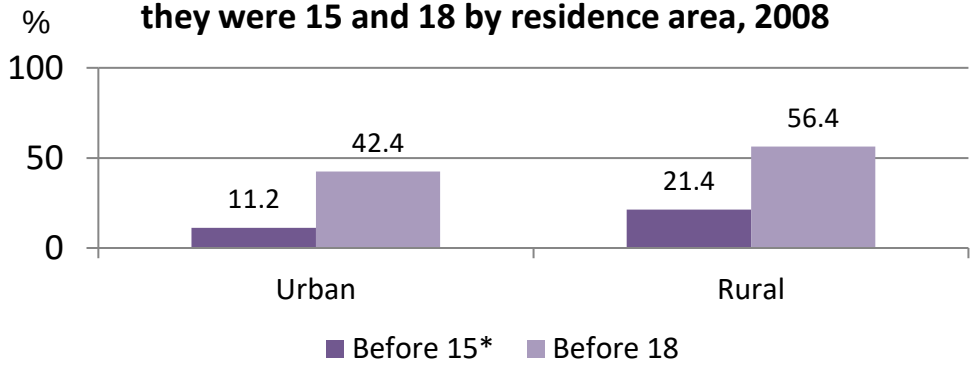
Early marriage remains high in Mozambique, particularly in rural areas, though levels have been decreasing

Calling attention to early marriage in view of emerging linkages between teenage pregnancy and stunting

Women aged 20-24 who were married before they were 15 and 18



Women aged 20-24 who were married before they were 15 and 18 by residence area, 2008



- Marriage before the age of 18+ is prohibited by law.
- = violation of children's rights and of the Convention of Elimination of all forms of Discrimination Against Women.
- Yet, early marriage is a widespread issue in Mozambique.
- Over half of women in rural areas are married before their 18th birthday

+ Increased in 2004 from 16 to 18 years
*MICS 2008 for marriages under 15 includes women age 15-49

Source: DHS 2003, MICS 2008, DHS 2011, PAMRDC

Indicator DASHBOARD

A monitoring and advocacy tool

Indicator Dashboard
Uganda example

Summarizing the nutrition situation in one page

		Indicator	Status National	Trend	Sev-erity	Target 2016	Status Western	Status Eastern
Nutritional Impact	Stunting	Prevalence of stunting among children <5 years old	33%	↗	🔴	32%	44%	25%
	Wasting	Prevalence of wasting among children <5 years old	5%	↗	🟡	N/A	3%	5%
	Underweight	Prevalence of underweight among children <5 years old	14%	↗		10%	16%	10%
		Prevalence of underweight among non-pregnant women 15-49 years old (with BMI < 18.5 kg/m2)	12%	↗		8%	8%	20%
	Iron deficiency	Prevalence of anaemia among children <5 years old	49%	↗	🔴	50%	39%	55%
		Prevalence of anaemia among women 15-49 years old	23%	↗	🟡	30%	17%	28%
Underlying Causes	Food Security	Percentage of households with poor or borderline food consumption	20%	↗		N/A	18%	24%
	Health	Percentage of newborns weighing <2.5 kg at birth	10%	↗		9%	8%	7%
	Care	Percentage of infants exclusively breastfed to age 6 months	63%	↗		75%	???	???
		Prevalence of diarrhoea among children 6-59 months old	23%	↗		N/A	19%	33%
Basic Causes	Education	Female literacy rate	64%	↗		N/A	63%	49%
	Gender	Women's intra-household decision-making power	37%	N/A		N/A	37%	26%

Note: Statistics presented in red are above the established targets, whereas those presented in green are below such targets.
Sources: DHS (2011 & 2006) / CFSVA (2013 & 2009)

Mozambique Situation Analysis Dashboard, Urban-Rural

		Indicator	URBAN	Severity	Trend	RURAL	Severity	Trend
Nutritional Impact	Stunting	Prevalence of stunting among children 6-59 mo. old	35.0 %	🔴	↓	45.5%	🔴	↑
	Wasting	GAM prevalence among children 6-59 mo. old	3.8 %	🟢	↓	6.7%	🟡	↓
		SAM prevalence among children 6-59 mo. old	1.4%	🟡	↓	2.4%	🔴	↓
	Vitamin A deficiency	Children <5 with Vitamin A deficiency	63.3 %	🔴	n.a.	73.1%	🔴	n.a.
	Iron deficiency	Children 6-59 mo. old with anemia	59.7 %	🔴	n.a.	72.0 %	🔴	n.a.
		Women 15-49 yrs.old with anemia	51.8 %	🔴	n.a.	55.1 %	🔴	n.a.
	IDD	Median urinary iodine level for school-aged children	89.6 µg/L	🟡	n.a.	59.2 µg/L	🟡	n.a.
Underlying Causes	Food Security	Households with poor or borderline food consu						
		Global Hunger Index Score						
	Health and Sanitation	Under 5 mortality rate	100	○	↑	111	○	↑
		Proportion of institutional deliveries	81.8 %	○	↑	44.5%	○	↑
		Households with access to improved water sources	85.3 %	🟡	n.a.	37.1 %	🔴	n.a.
		Households with access to improved sanitation facilities	43.7 %	TBD	n.a.	12.3 %	TBD	n.a.
	Care	Timely initiation of breastfeeding	75.0 %	○	↑	12.3 %	○	↑
		Infants 0-5 mo. old exclusively breastfed	--	--	--	--	--	--
		Children 6-23 mo. old receiving an acceptable diet	12.3 %	○	n.a.	13.3%	○	n.a.
		Households with a washing station equipped with water and soap/cleansing material	48.6 %	○	n.a.	24.3%	○	n.a.
		Households taking 30+ minutes to fetch water	18.1 %	○	↑	48.6 %	○	↑
Basic Causes	Education	Females that completed primary school or higher	49.0%	○	↑	11.2%	○	↑
		Females 15-49 yrs. who are literate	67.8 %	○	↑	25.5 %	○	↑
	Population	Total fertility rate	4.5	○	↓	6.6	○	↓
	Gender	Women who were married before 18 yrs.	42.4 %	○	n.a.	56.4 %	○	n.a.
		Women ages 15-19 who already had a child or are currently pregnant	30.8 %	○	↑	41.5 %	○	↑
	Poverty	Population living under national poverty line	49.6 %	○	↑	56.9 %	--	↑
		GINI Index	--	--	--	--	--	--

Reconfiguring dashboards to highlight disparities

SEVERITY
- 🟢 Not currently a serious problem
- 🟡 Requiring action
- 🔴 Urgent Problem requiring urgent action
- ○ Not applicable

TRENDS
↑ Improving ↓ Deteriorating → No Change

DRAFT

Indicator Dashboard – Iringa Region (Tanzania)

SITUATION ANALYSIS

- Not currently a serious problem
- Requiring action
- Serious problem requiring urgent action
- Not applicable

Devising sub-national dashboards

		Indicator	Status	Severity	Trend
Nutritional Impact	Stunting	Stunting among children 0-59 mo *	51.9%		improving
	Wasting	GAM prevalence among children 0-59 mo *	3.5%		improving
		SAM prevalence among children 0-59 mo *	0.8%		no change
	Underweight	Underweight among children 0-59 mo *	18.2%		improving
	Vitamin A Deficiency	Children 6-59 mo with Vitamin A deficiency *	35.1%		n.a.
	Iron Deficiency	Children 6-59 mo with anemia *	45.6%		no change
		Women 15-49 yrs with anemia *	28.3%		worsening
	Iodine Deficiency Disorders	School-aged children with iodine deficiency disorders †	24.7%		n.a.
Underlying Casues	Food Security	Households with poor or borderline food consumption ◊	14.5%		n.a.
	Health & Sanitation	Women 15-49 yrs with problem(s) accessing health care *	28.0%		improving
		Household access to improved water source *	68.1%		n.a.
	Care	Timely initiation of breastfeeding (within first hour) *	73.0%		improving
		Mothers who washed hands after using toilet ◊	90.2%		improving
Basic Causes	Education	Females that completed primary school or higher *	45.8%		improving
	Population	Total fertility rate *	5.4		improving
	Gender	Women's intra-household decision-making power *	20.9%		worsening

So what ? Leveraging the Multi-sectoral Nutrition Overview to influence planning and/or action

Going beyond numbers and charts

The Multi-sectoral Nutrition Overview,[1] including indicator dashboards, can catalyse change and/or prompt action in nutrition policy, planning as well as the implementation of nutrition interventions. For example, they may help to:

- Gain consensus on main nutrition problems and priority interventions
- Advocate for continued action/momentum for addressing child and maternal undernutrition in spite of recent progress in Ethiopia
- Inquire further on why Capo Delgado, Tete, Manica and Sofala provinces experienced decreases in stunting, yet increases in wasting, during the same period so that appropriate action can be taken
- Hold refresher trainings for health professionals on proper IYCF practices in Central and Mid-western regions of Nepal, where lowest proportions of children ages 6-23 months receive proper IYCF and severe stunting is highest
- Intensify construction and/or rehabilitation of safe water points and prioritise rural areas of Sierra Leone for household water treatment interventions
- Underscore regional, urban-rural, gender, etc. disparities with quantitative data to promote increased equity
- Promote common messages regarding the nutrition situation of the country

[1] The Multi-sectoral Nutrition Overview methodology was developed prior to the establishment of UN-Nutrition. The tool is now supported by the UN-Nutrition Secretariat in view of the current institutional arrangements for UN coordination on nutrition

Unlike a story book, this is not ‘THE END’

It is just the beginning and/or a basis upon which:

Country priority interventions are selected,

Stakeholders and activities are mapped

Institutional arrangements are analysed,

Delivery mechanisms are analysed

Coverage is mapped to plan

Policy formulation and reform is supported

Multi-sectoral planning and budgeting is supported

Coordination capacity is supported and enhanced

Efficiency and effectiveness are improved.

UN Nutrition

Visit https://www.unnutrition.org/ for further information