

M&E Guidance Series

Volume 9: Target Setting for Reduction in Prevalence of Poverty, Underweight and Stunting in Feed the Future Zones of Influence

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USAID's Bureau for Food Security (BFS) has developed a tool to inform target setting on the high-level indicators (poverty, underweight and stunting), as the population-based household baseline surveys in the Feed the Future zones of influence are near completion. This tool involves using a series of national data to run scenarios to set Feed the Future targets.

The data include historical trends in poverty reduction, GDP growth and nutritional status (underweight and stunting), and data analysis was conducted with guidance from poverty expert Don Sillers/EGAT (dsillers@usaid.gov) and nutrition expert Sally Abbott/GH/HIDN/NUT (sabbott@usaid.gov). More details on how the tool works and suggested target rates for high-level prevalence indicators of poverty, underweight and stunting for each country are included below.

How did we arrive at suggested targets for prevalence of poverty?

We started with FTF/BFS choosing a baseline proportional poverty reduction target of 20 percent over 5 years. In this context, a "proportional" poverty reduction is calculated relative to the prevalence of poverty observed at the start of the 5-year period. To illustrate, a 20 percent proportional reduction in a 15 percent initial poverty rate cuts that rate to 12 percent [0.15 - (0.15*0.2)=0.15-0.03=0.12], while a similar proportional reduction in a 60 percent initial poverty rate cuts that rate to 48 percent [0.60 - (0.60*0.20) = 0.60 - 0.12 = 0.48]. This baseline proportional poverty reduction was applied to all zones of influence. Twenty percent was selected as a starting point as it represents an aggressive yet reasonable goal for Feed the Future zones of influence given historical national poverty trends based on recent surveys in each country.

We then did some modeling against this global target to examine two factors with thresholds to inform our suggestions to you:

Factor One: We compared the actual annual percentage point reduction in the poverty rate between the last two national surveys available in each country (source: PovcalNet: the online tool for poverty measurement developed by the Development Research Group of the World Bank) with the targeted annual percentage point reduction in the poverty prevalence that would result by applying the 20 percent reduction target. The actual annual percentage point reduction value is formatted green in the table below if the country has been reducing poverty fast enough to meet our 20 percent target equivalent, white if not. Green gives us a greater level of confidence that there is national momentum in poverty reduction that should be a positive factor for reducing poverty in our zones of influence and that a 20 percent reduction or greater is possible to achieve.

Factor Two: We determined what the required per capita GDP growth rate would need to be to meet the targeted 20 percent proportional reduction at the national level, taking into consideration your country's Gini coefficient, using the Martin Ravallion Pro-Poor Growth model (pdf). Adding this economic growth rate to the recent population growth rate yields the required rate of overall per capita GDP growth needed to reach the poverty reduction target at the national level. We then compared the required growth rate with the actual rate achieved in recent years. If required growth was less than 1 percent over actual rates, we used the color green in the cell to signal that growth is at acceptable levels to reach or exceed the target 20 percent reduction.

Based on this information, we suggest the following range of poverty reduction targets per country:

	Preval	ence of Poverty 5-Yea	ar Targets	
Targeted Proportional Reduction in Poverty Rate	20%	Factor 1	Factor 2	FTF/BFS
Country		Average Annual Reduction in Poverty between two latest surveys*** (green if equal to or above 20% target)	Additional annual growth needed to achieve poverty reduction target over 5 years (green means less than 1% needed)	Suggested Proportional Reduction in Poverty Rate (percent)
Rwanda		0.0%	1.3%	10-15%
Bangladesh		-0.1%	-2.8%	20-25%
Ghana		1.3%	-0.8%	25-30%
Tanzania		3.0%	-1.2%	25-30%
Uganda		2.1%	0.3%	25-30%
Ethiopia		2.4%	-3.0%	25-30%
Kenya		0.8%	2.5%	15-20%
Senegal		1.9%	0.0%	25-30%
Mali		2.9%	0.5%	25-30%
Honduras		0.4%	4.2%	10-15%
Liberia		N.A.	-1.1%	15-20%
Malawi		1.3%	-0.2%	15-20%
Mozambique		2.0%	-2.6%	15-20%
Zambia		-0.3%	0.9%	10-15%
Guatemala		0.6%	3.2%	15-20%
Haiti		N.A.	6.7%	15-20%
Nepal		1.7%	1.5%	10-15%
Cambodia		1.6%	-1.7%	20-25%
Tajikistan		4.5%	-3.3%	20-25%
Nicaragua		0.9%	1.6%	15-20%

The attached tool also presents associated annual and 5-year percentage point reduction in national poverty rates needed to reach the Feed the Future suggested target. This is mainly instructional to demonstrate the importance of looking at both percent versus percentage point values. Steve Radelet, USAID Chief Economist, advises not to set annual percentage point reduction targets that exceed 3 points. Historically, reduction of this magnitude is uncommon even under the best of circumstances and we need to be careful to set aspirational targets that are not overly aggressive. Once you have completed your household baseline surveys and have determined initial poverty rates and total population in your zones, please assess your percent reduction target <u>and</u> its implied percentage point reduction in light of this advice, and reduce the FTF/BFS suggested target, if required.

How did we arrive at suggested targets for prevalence of underweight and stunting?

We started by examining the evidence in the literature and recent data trends in Feed the Future focus countries. In 2006, UNICEF released Progress for Children a report card on Nutrition (pdf), which presented trend analysis for underweight prevalence of children under 5 years of age based on the most recent data available for years between 1996 and 2005 in 110 countries, covering 98 percent of the developing world's under-5 population. There were great disparities in the annual rates of reduction (AARR) of underweight prevalence, however, the average AARR was 1.7 percent. At this rate, countries would not meet the Millennium Development Goal (MDG) target. In countries on track to reach the MDG target, the AARR was 2.6 percent or higher. The 2008 Lancet Series on Maternal and Child Undernutrition determines that with full coverage of a proven package of interventions, a 35 percent reduction in stunting would be possible by 36 months of age. In December 2011, the World Health Organization released a Maternal, infant and young child nutrition draft comprehensive implementation plan (pdf). This plan included a goal of a 40 percent reduction in childhood stunting by 2022, which translates into an AARR of 4 percent. This plan cites evidence

from Brazil (1974/75 to 2006) showing 30 percent absolute reduction, or an AARR of 2.7 percent and evidence from Bangladesh in certain areas showing a 13 percent absolute reduction, or an AARR of 4 percent. We conducted our own analysis of trends in reduction based on the Demographic and Health Surveys. In Feed the Future focus countries with two DHS data points for stunting, there has been an average 10.6 percent reduction in stunting over 5 years, or an AARR of 2.1 percent. For just the countries with a 2010 DHS compared to their last DHS, there was on average a 15 percent reduction in underweight (AARR of 3 percent) and 9.6 percent reduction in stunting over an average of five years (AARR of 1.9).

Based on this data and analysis, we suggest that countries target to reduce underweight and stunting by 20 to 30 percent (AARR of 4 to 6 percent) in targeted zones of influence. The table illustrates what a 20 and 30 percent reduction in both implies per country, using national DHS as a basis. Countries should apply these targets to the baseline prevalence of underweight and stunting in the zone of influence, once baseline data are available.

Preva	lence of Underwei	ght and Stun	ting, 5 year R	Reduction	Targets	
Country	Most recent DHS (in data from 2010): P children under 5 y	revalence in	5 year Targe yea		nce of childre	
	Underweight	Stunted	Underwe	eight	Stur	nted
	Onderweight	Stantea	20%	30%	20%	30%
Rwanda	11.4%	44.2%	9.1%	8.0%	35.4%	30.9%
Bangladesh	41.0%	43.2%	32.8%	28.7%	34.6%	30.2%
Ghana	13.9%	28.0%	11.1%	9.7%	22.4%	19.6%
Tanzania	15.8%	42.0%	12.6%	11.1%	33.6%	29.4%
Uganda	15.9%	38.1%	12.7%	11.1%	30.5%	26.7%
Ethiopia	28.7%	44.4%	23.0%	20.1%	35.5%	31.1%
Kenya	16.1%	35.3%	12.9%	11.3%	28.2%	24.7%
Senegal	17.7%	26.5%	14.2%	12.4%	21.2%	18.6%
Mali	26.7%	37.7%	21.4%	18.7%	30.2%	26.4%
Honduras	8.3%	30.0%	6.6%	5.8%	24.0%	21.0%
Liberia	19.2%	39.4%	15.4%	13.4%	31.5%	27.6%
Malawi	12.8%	47.1%	10.2%	9.0%	37.7%	33.0%
Mozambique	19.7%	47.0%	15.8%	13.8%	37.6%	32.9%
Zambia	14.6%	45.4%	11.7%	10.2%	36.3%	31.8%
Guatemala	13.1%	49.8%	10.5%	9.2%	39.8%	34.9%
Haiti	18.1%	29.4%	14.5%	12.7%	23.5%	20.6%
Nepal	28.8%	40.5%	23.0%	20.2%	32.4%	28.4%
Cambodia	28.3%	39.9%	22.6%	19.8%	31.9%	27.9%
Tajikistan	8.4%	28.9%	6.7%	5.9%	23.1%	20.2%
Nicaragua	6.0%	22.0%	4.8%	4.2%	17.6%	15.4%

It is important to differentiate these targets for high-level, population-based prevalence indicators from the projected number of direct beneficiaries reached with change in income and a change in nutritional status. Once you've completed cost-benefit and cost-effectiveness analysis (CBA/CEA) of your portfolio, we can support you with a crosscheck between current unit cost projections and the new CBA/CEA-generated projections for direct beneficiaries reached and adjust if necessary. The CBA results will also be used, in combination with guidance being developed based on evidence from the literature on multiplier effects of rural income growth, to assist you with setting targets for growth in per capita expenditure in Feed the Future zones of influence. To monitor and report performance against these "reach" projections, mid-term and final CBA/CEA updates should be conducted.

We will continue to work with EGAT, CBA in-house experts and other mechanisms to support you.

If Missions express sufficient interest, USAID/BFS will organize a video conference session to walk through the data, analysis and suggested targets. Otherwise, individual Missions can contact their CSI representative with questions and requests for consultation by the contributors to these data sets and analysis.

In the next pages you'll find Target Setting summary charts in the following categories:

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Overview of FTF Strategy and Development Hypothesis

The over-arching goal of Feed the Future is to reduce poverty and malnutrition. To achieve this goal, the FTF strategy calls for the USG to strive for FTF Strategy excellence in the delivery of Global Food Security foreign assistance. Therefore, the FTF strategy proposes to significantly reform the way Food Security assistance is delivered:

- Rather than spreading thin our food security dollars across countries, FTF has identified 20 focus countries for which to focus our assistance; 1
- Within each focus country, FTF will define specific geographic zones and populations to concentrate to the extent possible all of USG food security 2 programming and services;
- Within these zones, FTF will spotlight our programming on a limited number of agriculture value chains that present greatest growth prospects 3 especially for the extreme poor and women to benefit economically and nutritionally:
- FTF will amplify collaboration among USG agencies to align all food security programming to the FTF goal and FTF country-level strategies;
- Following the Rome Principles, FTF will build on host-country government investments and services, coordinate investments with other donors and 5 development partners, and exhaust opportunities to leverage private sector and civil society investments.

FTF Development **Hypothesis**

The FTF development hypothesis therefore states that IF we do this - focus, concentrate, and coordinate our foreign assistance dollars - THEN we will have broad, deep and sustainable economic and nutritional impact within FTF geographic zones. We also will create lasting momentum and local capacity within FTF geographic zones and the focus country to continue improving food security well beyond FTF assistance. FTF will measure the effectiveness of our development strategy and test its hypothesis by tracking change in (prevalence rates of) poverty and (prevalence rates of) malnutrition among the population in our geographic zones.

FTF Potential Beneficiaries

From data received from the field and other sources, we calculate globally that there are currently some 151 million people living in FTF geographic zones. On average, from this data we calculate that 45% of those people or 66 million individuals live below the international poverty line. Within the FTF zones, there are some 23 million children under 5 in the FTF target zones of which approximately 5 million children are underweight and 9 million children stunted. Our strategy and development hypothesis aims to improve the livelihoods of as many of these people -- economically and nutritionally -- in the FTF geographic zones as is possible.

	Та	rget Setting for F	TF Contribution	ns to Prevalence of Pov	erty and Under	nutrition Reduc	tion					
Country	Current Poverty Rate In FTF Target Zone	Projected Poverty Rate in FTF Taregt Zone after 5 years based on FTF/BFS Suggested Rates	Total number of people no longer poor after 5 years	Country	Current Underweight Rate In FTF Target Zone	_		number of less children underweight 30% reduction compared to 15% reduction (business as usual) from 2010 levels	Current StuntingRate In FTF Target Zone	Projected % Stunted (20% reduction from 2010 levels)	Projected number of less children stunted 20% reduction, compared to no reduction from 2010 levels	Projected number of less children stunted 20% reduction compared to 9.6% reduction
Rwanda	76.8%	65.3%	322,336	Rwanda	11.4%	8.0%	57,267	28,633	44.2%	35.4%	148,022	76,972
Bangladesh	50.5%	37.9%	3,094,734	Bangladesh	41.0%	28.7%	388,587	194,294	43.2%	34.6%	272,959	141,939
Ghana	30.0%	21.0%	620,524	Ghana	13.9%	9.7%	57,616	28,808	28.0%	22.4%	77,374	40,234
Tanzania	67.8%	47.5%	1,003,691	Tanzania	15.8%	11.1%	67,840	33,920	42.0%	33.6%	120,223	62,516
Uganda	37.7%	26.4%	1,717,555	Uganda	15.9%	11.1%	244,161	122,080	38.1%	30.5%	390,043	202,822
Ethiopia	39.0%	27.3%	1,008,748	Ethiopia	28.7%	20.1%	163,047	81,523	44.4%	35.5%	168,160	87,443
Kenya	19.7%	15.8%	501,369	Kenya	16.1%	11.3%	206,075	103,038	35.3%	28.2%	301,219	156,634
Senegal	33.5%	23.5%	400,025	Senegal	17.7%	12.4%	53,113	26,556	26.5%	21.2%	53,013	27,567
Mali	51.4%	38.6%	301,664	Mali	26.7%	18.7%	56,948	28,474	37.7%	30.2%	53,606	27,875
Honduras	23.2%	19.7%	30,577	Honduras	8.3%	5.8%	5,638	2,819	30.0%	24.0%	13,585	7,064
Liberia	83.6%	71.1%	(2,160)	Liberia	19.2%	13.4%	34,584	17,292	39.4%	31.5%	47,312	24,602
Malawi	73.8%	59.0%	365,309	Malawi	12.8%	9.0%	36,450	18,225	47.1%	37.7%	89,416	46,496
Mozambique	59.5%	47.6%	424,008	Mozambique	19.7%	13.8%	62,020	31,010	47.0%	37.6%	98,644	51,295
Zambia	64.3%	54.7%	69,004	Zambia	14.6%	10.2%	15,630	7,815	45.4%	36.3%	32,403	16,849
Guatemala	11.7%	9.4%	41,556	Guatemala	13.1%	9.2%	21,238	10,619	49.8%	39.8%	53,825	27,989
Haiti	54.9%	43.9%	244,686	Haiti	18.1%	12.7%	22,005	11,002	29.4%	23.5%	23,829	12,391
Nepal	55.1%	46.8%	259,343	Nepal	28.8%	20.2%	58,394	29,197	40.5%	32.4%	54,745	28,467
Cambodia	28.3%	21.2%	170,998	Cambodia	28.3%	19.8%	29,399	14,699	39.9%	31.9%	27,633	14,369
Tajikistan	21.5%	16.1%	51,457	Tajikistan	8.4%	5.9%	4,129	2,065	28.9%	23.1%	9,471	4,925
Nicaragua	15.8%	12.6%	19,068	Nicaragua	6.0%	4.2%	1,699	850	22.0%	17.6%	4,153	2,160
Average Rates	44.9%	35.3%		Average Rates	20.5%	14.2%	1,585,839	792,920	39.2%	31.3%	2,039,635	1,060,610
Total number of pyears	people no longer ex	xtreme poor after 5	10,644,493	After 5 yrs total number of less children in zone of influence with	30% reduction in underweight reduction from 2010 levels a reduction.	•	1,585,839	792,920	20% reduction in stunting coreduction from 2010 levels trends of reduction.	•	2,039,635	1,060,610

Country				Poverty			
Country		2010			2015		
	Total population in target zone	Population in poverty in target zone	Percent in poverty	Projected total population in target zone	Projected population in poverty in target zone	Projected percent in poverty	Projected people no longer poor
Rwanda	8,334,647	6,401,009	76.8%	9,311,693	6,078,673	65.3%	322,336
Bangladesh	29,500,000	14,897,500	50.5%	31,162,419	11,802,766	37.9%	3,094,734
Ghana	8,600,000	2,580,000	30.0%	9,330,839	1,959,476	21.0%	620,524
Tanzania	6,888,845	4,670,637	67.8%	7,726,392	3,666,946	47.5%	1,003,691
Uganda	22,349,000	8,425,573	37.7%	25,418,786	6,708,018	26.4%	1,717,555
Ethiopia	11,500,000	4,485,000	39.0%	12,733,524	3,476,252	27.3%	1,008,748
Kenya	22,700,000	4,471,900	19.7%	25,193,728	3,970,531	15.8%	501,369
Senegal	5,330,618	1,785,757	33.5%	5,909,304	1,385,732	23.5%	400,025
Mali	3,328,346	1,710,770	51.4%	3,655,268	1,409,106	38.6%	301,664
Honduras	1,641,442	380,815	23.2%	1,776,053	350,238	19.7%	30,577
Liberia	2,879,300	2,407,095	83.6%	3,390,452	2,409,255	71.1%	(2,160)
Malawi	4,600,000	3,394,800	73.8%	5,131,251	3,029,491	59.0%	365,309
Mozambique	5,692,242	3,386,884	59.5%	6,224,530	2,962,876	47.6%	424,008
Zambia	1,707,310	1,097,800	64.3%	1,882,345	1,028,796	54.7%	69,004
Guatemala	3,168,021	370,658	11.7%	3,516,047	329,102	9.4%	41,556
Haiti	3,000,000	1,647,000	54.9%	3,192,883	1,402,314	43.9%	244,686
Nepal	5,380,000	2,964,380	55.1%	5,775,675	2,705,037	46.8%	259,343
Cambodia	3,040,400	859,521	28.3%	3,247,365	688,523	21.2%	170,998
Tajikistan	1,206,839	259,470	21.5%	1,290,005	208,013	16.1%	51,457
Nicaragua	769,100	121,518	15.8%	810,520	102,450	12.6%	19,068
Total	151,616,110	66,318,087	45%	166,679,079	55,673,595	35.3%	10,644,493

Targeted Prop		20%	Hide?	Hide?	Factor 1	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	Hide	
Country	Initial Poverty Rate, Most Recent Survey*	Poverty Rate, Previous Survey	Year of Most Recent Survey	Year of Previous Survey	Average Annual Reduction in Poverty between two latest surveys*** (green if equal to or above target)	Data year	Average GDP growth rate (1999- 2010)	Population Growth Rate*	Perc Rec	Average Fentage Poluction Ra	int	Target Poverty Headcount Rate	Implied targeted reduction in poverty rate over 5 years (pcntg points)	Implied reduction in poverty rate per year (pcntg points)	Inequality (Gini)	Growth Elasticity of Poverty Reduction	Per-Capita growth needed over 5-year period	Per-capita growth needed per year	GDP Growth needed per year
Rwanda	76.8%	76.6%	2005	2000	0.0%	2005	5.3%	2.8%		0.0%		61.4%	15.4%	3.1%	0.53	-0.96	21%	3.8%	6.7%
Bangladesh	50.5%	49.6%	2005	1995	-0.1%	2005	5.6%	1.4%	-0.1%			40.4%	10.1%	2.0%	0.33	-2.78	7%	1.4%	2.8%
Ghana	30.0%	39.1%	2005	1998	1.3%	2005	5.1%	2.1%		1.3%		24.0%	6.0%	1.2%	0.43	-1.75	11%	2.2%	4.2%
Tanzania	67.8%	88.5%	2007	2000	3.0%	2007	5.8%	2.9%		3.0%		54.2%	13.6%	2.7%	0.38	-2.27	9%	1.7%	4.6%
Uganda	37.7%	64.4%	2009	1996	2.1%	2009	5.4%	3.3%		2.1%		30.2%	7.5%	1.5%	0.44	-1.61	12%	2.4%	5.6%
Ethiopia	39.0%	60.5%	2004	1995	2.4%	2004	6.8%	2.6%		2.4%		31.2%	7.8%	1.6%	0.30	-3.23	6%	1.2%	3.8%
Kenya	19.7%	28.5%	2005	1994	0.8%	2005	2.9%	2.6%		0.8%		15.8%	3.9%	0.8%	0.48	-1.34	15%	2.8%	5.5%
Senegal	33.5%	54.1%	2005	1994	1.9%	2005	4.5%	2.6%		1.9%		26.8%	6.7%	1.3%	0.39	-2.10	10%	1.8%	4.4%
Mali	51.4%	86.1%	2006	1994	2.9%	2006	3.7%	2.4%		2.9%		41.1%	10.3%	2.1%	0.39	-2.12	9%	1.8%	4.2%
Honduras	23.2%	28.3%	2007	1994	0.4%	2007	2.9%	2.0%			0.4%	18.6%	4.6%	0.9%	0.58	-0.71	28%	5.1%	7.1%
Liberia	83.6%	83.7%	2007		N.A.	2007	7.0%	4.2%		N.A.		66.9%	16.7%	3.3%	0.38	-2.21	9%	1.8%	5.9%
Malawi	73.8%	83.1%	2004	1997	1.3%	2004	4.8%	2.8%		1.3%		59.0%	14.8%	3.0%	0.39	-2.12	9%	1.8%	4.6%
Mozambique	59.5%	81.3%	2007	1996	2.0%	2007	7.4%	2.3%		2.0%		47.6%	11.9%	2.4%	0.46	-1.50	13%	2.5%	4.8%
Zambia	64.3%	62.1%	2004	1996	-0.3%	2004	4.9%	2.5%		-0.3%		51.4%	12.9%	2.6%	0.51	-1.12	18%	3.4%	5.8%
Guatemala	11.7%	16.4%	2006	1998	0.6%	2006	3.5%	2.6%			0.6%	9.4%	2.3%	0.5%	0.54	-0.93	22%	4.0%	6.6%
Haiti	54.9%	54.9%	2001		N.A.	2001	0.6%	1.6%			N.A.	43.9%	11.0%	2.2%	0.60	-0.62	32%	5.8%	7.3%
Nepal	55.1%	68.4%	2003	1995	1.7%	2003	3.1%	1.8%	1.7%			44.1%	11.0%	2.2%	0.47	-1.37	15%	2.8%	4.6%
Cambodia	28.3%	48.6%	2007	1994	1.6%	2004	5.8%	1.7%	1.6%			22.6%	5.7%	1.1%	0.44	-1.61	12%	2.4%	4.0%
Tajikistan	21.5%	44.0%	2004	1999	4.5%	2004	6.4%	1.7%	4.5%			17.2%	4.3%	0.9%	0.34	-2.73	7%	1.4%	3.1%
Nicaragua	15.8%	22.3%	2005	1998	0.9%	2005	3.4%	1.3%			0.9%	12.6%	3.2%	0.6%	0.52	-1.01	20%	3.7%	5.0%

^{*} At \$1.25/day PPP International Poverty Line; data from PovCalNet

^{* 2009} World Bank Population growth (annual %)

^{**}Poverty data: A supplement to World Development Indicators 2008, World Bank

^{***}PovcalNet

Factor 2 Additional annual growth needed to achieve poverty reduction target over 5 years (green means less than 1% needed)	FTF/BFS/EGAT RECOMMENDATION	Five -year Target Poverty Rate (percent)	Implied targeted reduction in poverty rate over 5 years (pcntg points)	Implied reduction in poverty rate per year (pcntg points)
1.3%	15%	65.3%	11.5%	2.3%
-2.8%	25%	37.9%	12.6%	2.5%
-0.8%	30%	21.0%	9.0%	1.8%
-1.2%	30%	47.5%	20.3%	4.1%
0.3%	30%	26.4%	11.3%	2.3%
-3.0%	30%	27.3%	11.7%	2.3%
2.5%	20%	15.8%	3.9%	0.8%
0.0%	30%	23.5%	10.1%	2.0%
0.5%	25%	38.6%	12.9%	2.6%
4.2%	15%	19.7%	3.5%	0.7%
-1.1%	15%	71.1%	12.5%	2.5%
-0.2%	20%	59.0%	14.8%	3.0%
-2.6%	20%	47.6%	11.9%	2.4%
0.9%	15%	54.7%	9.6%	1.9%
3.2%	20%	9.4%	2.3%	0.5%
6.7%	20%	43.9%	11.0%	2.2%
1.5%	15%	46.8%	8.3%	1.7%
-1.7%	25%	21.2%	7.1%	1.4%
-3.3%	25%	16.1%	5.4%	1.1%
1.6%	20%	12.6%	3.2%	0.6%

Country	% 1999	% 2000	% 2001	% 2002	% 2003	% 2004	% 2005	% 2006	% 2007	% 2008	% 2009	% 2010	Average GDP growth rate (1999-2010)
Rwanda	5.30%	5.80%	5.00%	4.00%	3.50%	0.90%	5.20%	5.80%	6.00%	11.20%	4.50%	6.50%	5.31%
Bangladesh	5.20%	5.30%	5.60%	4.40%	5.30%	4.90%	6.40%	6.60%	6.30%	4.90%	5.70%	6.00%	5.55%
Ghana	4.30%	3.00%	3.00%	5.80%	4.70%	5.40%	5.90%	6.00%	5.50%	7.30%	4.10%	5.70%	5.06%
Tanzania	4.00%	5.20%	5.00%	5.20%	5.20%	5.80%	6.80%	5.80%	7.30%	7.10%	6.00%	6.50%	5.83%
Uganda	5.50%	6.00%	5.10%	5.50%	4.40%	5.00%	4.00%	5.30%	6.00%	6.90%	5.30%	5.20%	5.35%
Ethiopia	0.00%	2.00%	7.30%	5.50%	-3.80%	11.60%	8.90%	10.60%	11.10%	11.60%	8.70%	8.00%	6.79%
Kenya	1.50%	0.40%	1.00%	0.80%	1.50%	2.20%	5.80%	5.70%	7.00%	1.70%	2.60%	5.00%	2.93%
Senegal	5.00%	5.70%	5.70%	5.00%	5.50%	3.20%	6.10%	2.00%	4.60%	4.80%	1.80%	4.20%	4.47%
Mali	5.00%	4.80%	-1.20%	4.50%	0.50%	4.00%	6.10%	5.10%	2.80%	4.20%	4.40%	4.50%	3.73%
Honduras	-3.00%	5.00%	2.10%	2.00%	3.00%	4.20%	4.20%	6.00%	6.30%	4.00%	-2.10%	2.80%	2.88%
Liberia	0.50%	15.00%	5.00%	-5.00%	3.00%	21.80%	9.80%	7.80%	9.40%	7.10%	4.60%	5.10%	7.01%
Malawi	4.20%	3.00%	1.70%	1.20%	1.70%	4.00%	1.90%	8.50%	8.00%	8.60%	7.60%	6.60%	4.75%
Mozambique	10.00%	3.80%	9.20%	8.00%	7.00%	8.20%	7.50%	7.90%	7.30%	6.50%	6.30%	7.00%	7.39%
Zambia	1.50%	4.00%	3.90%	4.20%	4.00%	4.60%	5.00%	5.80%	6.00%	6.00%	6.30%	7.60%	4.91%
Guatemala	3.50%	3.00%	2.30%	2.00%	2.10%	2.60%	3.20%	4.60%	5.70%	4.00%	6.00%	2.60%	3.47%
Haiti	2.40%	1.20%	-1.20%	-1.50%	0.00%	-0.04%	1.80%	2.50%	3.20%	1.30%	2.90%	-5.10%	0.62%
Nepal	3.40%	3.70%	2.60%	-0.60%	3.00%	3.00%	2.70%	1.90%	3.20%	4.70%	4.70%	4.60%	3.08%
Cambodia	4.00%	4.00%	5.30%	5.20%	5.00%	5.40%	13.40%	7.20%	10.10%	5.00%	-1.50%	6.00%	5.76%
Tajikistan	2.00%	5.10%	8.30%	5.00%	7.00%	10.50%	6.70%	7.00%	7.80%	7.90%	3.40%	6.50%	6.43%
Nicaragua	6.30%	5.00%	2.50%	2.40%	2.30%	4.00%	4.00%	3.70%	3.80%	3.20%	-1.50%	4.50%	3.35%

Country Name	Indicator Name		Country Don ent on Agric		•	10 yr annual	•	Change in Ag	Change in Ag	Change in Ag
, ,		Previous (2005-08)	Current (2010-11)	Trend	growth rate ave	growth rate ave	growth rate ave	as % of GDP over 15 yrs	as % of GDP over 10 yrs	as % of GDP over 5 yrs
	% Host Country Domestic Budget Spent on Ag.	5.7%	8.6%	\uparrow						
Bangladesh	Agriculture, value added (% of GDP)							-7.8	-6.9	-1.6
	Agriculture, value added (annual % growth)				4	3.8	4.0			
	% Host Country Domestic Budget Spent on Ag.	1.0%	1.0%	\rightarrow						
Cambodia	Agriculture, value added (% of GDP)							-13.6	-1.8	3.6
	Agriculture, value added (annual % growth)				4	4.7	6.9			
	% Host Country Domestic Budget Spent on Ag.	11.7%	17.0%	\uparrow						
Ethiopia	Agriculture, value added (% of GDP)							-9.8	-2.2	1.0
	Agriculture, value added (annual % growth)				5	6.4	8.9			
	% Host Country Domestic Budget Spent on Ag.	5.6%	10.0%	\uparrow						
Ghana	Agriculture, value added (% of GDP)							-12.5	-9.2	-10.7
	Agriculture, value added (annual % growth)				5	4.52	4.52			
	% Host Country Domestic Budget Spent on Ag.	7.0%	1.6%	\downarrow						
Guatemala	Agriculture, value added (% of GDP)							-2.1	-2.1	-0.4
	Agriculture, value added (annual % growth)				3	2.8	2.4			
	% Host Country Domestic Budget Spent on Ag.	2.0%	2.4%	\uparrow						
Haiti	Agriculture, value added (% of GDP)							0.0	0.0	0.0
	Agriculture, value added (annual % growth)				-1	-0.6	0.7			
	% Host Country Domestic Budget Spent on Ag.	1.2%	1.1%	\downarrow						
Honduras	Agriculture, value added (% of GDP)							-9.0	-3.4	-1.1
	Agriculture, value added (annual % growth)				3	3.7	2.2			
	% Host Country Domestic Budget Spent on Ag.	5.0%	2.0%	\downarrow						
Kenya	Agriculture, value added (% of GDP)							-11.7	-13.0	-7.8
	Agriculture, value added (annual % growth)				3	1.8	1.5			_
	% Host Country Domestic Budget Spent on Ag.	1.0%	3.0%	\uparrow						
Liberia	Agriculture, value added (% of GDP)							-20.5	-10.7	-4.5
	Agriculture, value added (annual % growth)						0			
	% Host Country Domestic Budget Spent on Ag.	11.0%	13.0%	\uparrow						
Malawi	Agriculture, value added (% of GDP)							0.1	-9.0	-2.1
	Agriculture, value added (annual % growth)				8	3.3	4.1			

	% Host Country Domestic Budget Spent on Ag.	11.0%	13.0%	\uparrow						
Mali	Agriculture, value added (% of GDP)							-13.0	-5.0	0.0
	Agriculture, value added (annual % growth)				4	3.3	5.2			
	% Host Country Domestic Budget Spent on Ag.	9.0%	5.0%	\downarrow						
Mozambique	Agriculture, value added (% of GDP)							-2.9	7.8	4.9
	Agriculture, value added (annual % growth)				8	6.8	9.2			
	% Host Country Domestic Budget Spent on Ag.	2.5%	5.0%	\uparrow						
Nepal	Agriculture, value added (% of GDP)							-5.7	-4.7	-0.3
	Agriculture, value added (annual % growth)				3	3.4	2.7			
	% Host Country Domestic Budget Spent on Ag.	3.3%	7.1%	\uparrow						
Rwanda	Agriculture, value added (% of GDP)							-10.1	-3.3	-4.5
	Agriculture, value added (annual % growth)				11	6.5	6.5			
	% Host Country Domestic Budget Spent on Ag.	10.0%	14.0%	\uparrow						
Senegal	Agriculture, value added (% of GDP)							-4.3	-2.4	0.0
	Agriculture, value added (annual % growth)				3	2.9	4.6			
	% Host Country Domestic Budget Spent on Ag.	5.4%	5.8%	\uparrow						
Tajikistan	Agriculture, value added (% of GDP)							-17.1	-6.1	-2.6
	Agriculture, value added (annual % growth)				4	8.1	5.3			
	% Host Country Domestic Budget Spent on Ag.	7.0%	7.0%	\longrightarrow						
Tanzania	Agriculture, value added (% of GDP)							-19.0	-5.3	-3.6
	Agriculture, value added (annual % growth)				4	4.5	4.3			
	% Host Country Domestic Budget Spent on Ag.	3.0%	4.0%	\wedge						
Uganda	Agriculture, value added (% of GDP)							-25.1	-5.1	-2.5
	Agriculture, value added (annual % growth)				3	2.4	1.3			
	% Host Country Domestic Budget Spent on Ag.	4.0%	4.0%	\longrightarrow						
Zambia	Agriculture, value added (% of GDP)							-9.2	-13.2	-14.2
	Agriculture, value added (annual % growth)				3	0.8	0.3			
	% Host Country Domestic Budget Spent on Ag.	4%	3%	\downarrow						
Nicaragua	Agriculture, value added (% of GDP)							-2.0	0.5	2.4
	Agriculture, value added (annual % growth)				4	3.8	3.3			

		Cou	ntry									
			Titl y			2010					2015	
	Total population, 2010	2010 Total population in target zone	2010 Total Population, World Bank Data	Percent Population under five, 2010	Estimated Total population of children under five in target zone 2010	Percent under- weight as of 2010 DHS surveys	Percent Stunted as of 2010 DHS surveys	Estimated Population of children under five who are underweight in target zone	Estimated Population of children under five who are stunted in target zone	Population growth rate	Projected total population of children under five in target zone	Projected total population of children under five who are underweight in target zone, no reduction from 2010 levels
Rwanda	10,624,005	8,334,647	10624005	17.5%	1,457,802	11.4%	44.2%	166,189	644,349	2.81%	1,674,463	190,889
Bangladesh	148,692,131	29,500,000	148692131	10.0%	2,950,000	41.0%	43.2%	1,209,500	1,274,400	1.38%	3,159,246	1,295,291
Ghana	24,391,823	8,600,000	24391823	14.5%	1,247,751	13.9%	28.0%	173,437	349,370	2.06%	1,381,674	192,053
Tanzania	44,841,226	6,888,845	44841226	18.0%	1,239,992	15.8%	42.0%	195,919	520,797	2.91%	1,431,221	226,133
Uganda	33,424,683	22,349,000	33424683	19.5%	4,357,996	15.9%	38.1%	692,921	1,660,396	3.27%	5,118,676	813,870
Ethiopia	82,949,541	11,500,000	82949541	14.5%	1,667,232	28.7%	44.4%	478,496	740,251	2.58%	1,893,693	543,490
Kenya	40,512,682	22,700,000	40512682	16.5%	3,745,373	16.1%	35.3%	603,005	1,322,117	2.64%	4,266,564	686,917
Senegal	12,433,728	5,330,618	12433728	16.5%	879,338	17.7%	26.5%	155,643	233,024	2.61%	1,000,240	177,042
Mali	15,369,809	3,328,346	15369809	19.0%	632,386	26.7%	37.7%	168,847	238,409	2.37%	710,961	189,827
Honduras	7,600,524	1,641,442	7,600,524	12.5%	205,176	8.3%	30.0%	17,030	61,553	1.99%	226,419	18,793
Liberia	3,994,122	2,879,300	3994122	17.0%	489,481	19.2%	39.4%	93,980	192,856	4.17%	600,412	115,279
Malawi	14,900,841	4,600,000	14900841	18.0%	828,000	12.8%	47.1%	105,984	389,988	2.77%	949,210	121,499
Mozambique	23,390,765	5,692,242	23390765	16.5%	938,454	19.7%	47.0%	184,875	441,073	2.26%	1,049,402	206,732
Zambia	12,926,409	1,707,310	12926409	18.5%	315,872	14.6%	45.4%	46,117	143,406	2.47%	356,857	52,101
Guatemala	14,388,929	3,168,021	14388929	15.0%	474,399	13.1%	49.8%	62,146	236,251	2.64%	540,415	70,794
Haiti	9,993,247	3,000,000	9993247	12.5%	374,880	18.1%	29.4%	67,853	110,215	1.57%	405,247	73,350
Nepal	29,959,364	5,380,000	29959364	11.5%	618,489	28.8%	40.5%	178,125	250,488	1.79%	675,861	194,648
Cambodia	14,138,255	3,040,400	14138255	10.5%	318,914	28.3%	39.9%	90,253	127,247	1.66%	346,277	97,996
Tajikistan**	6,878,637	1,206,839	6,878,637	12.5%	150,759	8.4%	28.9%	12,664	43,569	1.68%	163,856	13,764
Nicaragua*	5,788,163	769,100	5,788,163	11.5%	88,406	6.0%	22.0%	5,304	19,449	1.32%	94,397	5,664
Total	557,198,884	151,616,110		15.2%	22,980,699	20.5%	39.2%	4,708,289	8,999,208		26,045,091	5,286,131

Projected total population of children under five who are stunted in target zone, no reduction from 2010 levels	Projected percent under-weight (15% reduction) previous investment level trend over 5 years	Projected percent under-weight (30% reduction)	Projected total population of children under five who are underweight in target zone 15% reduction	Projected total population of children under five who are underweight in target zone 30% reduction	Projected number of less children underweight 30% reduction compared to no reduction from 2010 levels	Projected number of less children underweight 30% reduction compared to 15% reduction (business as usual) from 2010 levels	Projected Stunted 9.6% reduction (business as ususal)	Projected % Stunted (20% reduction)	Projected total population of children under five who are stunted in target zone 9.6% reduction	Projected total population of children under five who are stunted in target zone 20% reduction	Projected number of less children stunted 20% reduction, compared to no reduction from 2010 levels	Projected number of less children stunted 20% reduction compared to 9.6% reduction
740,112	9.7%	8%	162,255	133,622	57,267	28,633	40.0%	35.36%	669,062	592,090	148,022	76,972
1,364,794	34.9%	29%	1,100,997	906,704	388,587	194,294	39.1%	34.56%	1,233,774	1,091,835	272,959	141,939
386,869	11.8%	10%	163,245	134,437	57,616	28,808	25.3%	22.40%	349,729	309,495	77,374	40,234
601,113	13.4%	11%	192,213	158,293	67,840	33,920	38.0%	33.60%	543,406	480,890	120,223	62,516
1,950,216	13.5%	11%	691,789	569,709	244,161	122,080	34.4%	30.48%	1,762,995	1,560,173	390,043	202,822
840,800	24.4%	20%	461,966	380,443	163,047	81,523	40.1%	35.52%	760,083	672,640	168,160	87,443
1,506,097	13.7%	11%	583,879	480,842	206,075	103,038	31.9%	28.24%	1,361,512	1,204,878	301,219	156,634
265,064	15.0%	12%	150,486	123,930	53,113	26,556	24.0%	21.20%	239,617	212,051	53,013	27,567
268,032	22.7%	19%	161,353	132,879	56,948	28,474	34.1%	30.16%	242,301	214,426	53,606	27,875
67,926	7.1%	6%	15,974	13,155	5,638	2,819	27.1%	24.00%	61,405	54,341	13,585	7,064
236,562	16.3%	13%	97,987	80,695	34,584	17,292	35.6%	31.52%	213,852	189,250	47,312	24,602
447,078	10.9%	9%	103,274	85,049	36,450	18,225	42.6%	37.68%	404,158	357,662	89,416	46,496
493,219	16.7%	14%	175,722	144,712	62,020	31,010	42.5%	37.60%	445,870	394,575	98,644	51,295
162,013	12.4%	10%	44,286	36,471	15,630	7,815	41.0%	36.32%	146,460	129,610	32,403	16,849
269,127	11.1%	9%	60,175	49,556	21,238	10,619	45.0%	39.84%	243,290	215,301	53,825	27,989
119,143	15.4%	13%	62,347	51,345	22,005	11,002	26.6%	23.52%	107,705	95,314	23,829	12,391
273,724	24.5%	20%	165,451	136,254	58,394	29,197	36.6%	32.40%	247,446	218,979	54,745	28,467
138,165	24.1%	20%	83,297	68,598	29,399	14,699	36.1%	31.92%	124,901	110,532	27,633	14,369
47,354	7.1%	6%	11,699	9,635	4,129	2,065	26.1%	23.12%	42,808	37,883	9,471	4,925
20,767	5.1%	4%	4,814	3,965	1,699	850	19.9%	17.60%	18,774	16,614		2,160
10,198,174	17.3%	14%	4,493,211	3,700,292	1,585,839	792,920		31.32%	9,219,149	8,158,539	2,039,635	1,060,610

Country	year previous DHS (before 2010)	new DHS	difference in years	0-4 population	% Underweight Before 2010 DHS	# underweight before 2010 DHS	% underweight; new DHS	# underweight new DHS	% change from previous DHS	30% change would have been	% stunted before 2010 DHS	# stunted before 2010 DHS	% stunted 2010 DHS
Afr													
Ethiopia	2005	2010	5	12,025,752	32.9	3956472.247	28.7	3451390.683	12.77%	23.03	50.8	6109081.767	44.4
Malawi	2006	2010	4	2,682,151	17.3	464012.1887	12.8	343315.3766	26.01%	12.11	52.5	1408129.475	47
Rwanda	2005	2010	5	1,858,231	17.5	325190.4145	11.4	211838.3272	34.86%	12.25	51.1	949556.0103	44
Senegal	2005	2010	5	2,051,065	14.2	291251.2726	17.7	363038.5581	-24.65%	9.94	19.6	402008.7988	26.5
Tanzania	2004	2010	6	8,071,421	16.4	1323712.992	15.8	1275284.467	3.66%	11.48	44.3	3575639.361	42
A&ME													
Cambodia	2005	2010	5	1,482,991	28.1	416720.5609	28.3	419686.5436	-0.71%	19.67	42.7	633237.2936	39.9
Nepal	2006	2010	4	3,444,152	38.6	1329442.761	28.8	991915.8422	25.39%	27.02	49.3	1697967.049	41
Total			4.857142857	31615763.36	26.46%	8106802.436	22.32%	7056469.799	15.65%	18.52%	0.467349771	14775619.75	0.422416224
					0.041400825	0.008280165			0.032214076				

# stunted 2010 DHS	% change from previous DHS	20% reduction would have been	would
5000400.57	10.500/	40.64	25.50
5339433.67	12.60%	40.64	35.56
1260611.149	10.48%	42.00	36.75
817621.6136	13.89%	40.88	35.77
543532.3045	-35.20%	15.68	13.72
3389996.686	5.19%	35.44	31.01
591713.5367	6.56%	34.16	29.89
1412102.414	16.84%	39.44	34.51
42255044.27	0.640		
13355011.37	9.61%		

1st data point 6109082
6109082
6109082
6109082
1220620
1238630
2386319
1408129
1238192
1635082
949556
402008.8
3575639
2919941
1267512
7583299
633237.3
1697967
1169995
358393.3
34572983

stunted 2nd data point

5339433.67

990904.3284

2359581.244

1260611.149

1100939.419

1812473.521

817621.6136

543532.3045

3389996.686

2483252.981

1085755.319

6423500.059

591713.5367

1412102.414

1073034.495

367134.5992

31051587.34

						Stunting, Average 5 year Change with 2
Underweight		Underweight			Stunting	data
2005	Stunting 2005	2010	Stunting 2010	Underweight,	Average	points
Population	Population	Population	Population	Average Change	Change	from
weighted	Weighted	weighted	Weighted	2005-2010 (five	2005-	more
average	Average	average	Average	year change)	2010	countries
26.46%	46.7%	22.32%	42.2%	15.65%	9.61%	10.1%

POPULATIONS	AND CHILDREN R	REACHED
SCENARIO: \$490 MILLION FY09-FY14		
		With backloading and a reduction in budget, we would eliminate countries from
Number of children under 5 (million) in priority		nutrition funding. The original calculation
countries	65.6	was on a base of 78.7 million children.
Number of children under 2 (million) in priority		
countries (=number of children under 5 *41%)	26.896	41% of the children under 5
Number of children under 2 reached with appropriate		\$490 million total budget FY09-FY14. \$386 million without global costs. \$30/child
package of nutrition interventions in priority countries		under two/over three years from pregnancy
(based on rationale noted to the right)	4.3	to 24 months=652 million/\$90=4.3 million
Proportion of children under 2 reached (= number of children under 2 reached with package of nutrition interventions in priority countries / number of children		
under 2 in priority countries)	0.16	
Number of children under 5 (million) reached in priority		
countries (= proportion of children under 2 reached *		
number of children under 5 in priority countries)	10.49	

IMPACT ON STUNTING	
Prevalence of stunting < 5 in absence of intervention	
(Based on baseline data taken from Demographic and	
Health Surveys indicate the average (not-weighted)	
prevalence)	0.42
# < 5 stunted in population reached in absence of	
interventions (=number of children under five reached	
in priority countries * prevalence of stunting <5 in	
absence of intervention)	4.4

Latest DHS data and the removal of countries resulted in a change from 44% to 42%

Prevalence of stunting < 5 with intervention (based on	
anticipated 35% reduction in prevalence as documented	
in Lancet 2008 series on maternal & child nutrition) OR	
(= prevalence of stunting <5 in absence of intervention *	
0.8)	33.6%
# < 5 stunted (millions) in population with intervention	
(= # of children <5 reached in priority countries *	
prevalence of stunting <5 with intervention)	3.5
# of cases of stunting prevented (million) (= #<5 stunted	
in population in absence of intervention - #<5 stunted in	
population with intervention)	0.9
Per year (= # of cases stunting prevented (million) /	
number of fiscal years 3)	0.22

20% reduction

4 fiscal years of robust funding

POPULATIONS AND CHILDREN REACHED				
SCENARIO: \$1.279 BILLION FY09-FY15				
Number of children under 5 (million) in priority				
countries	78.7			
Number of children under 2 (million) in priority				
countries (=number of children under 5 *41%)	32.2			
		\$1.279 billion total budget FY09-FY15.		
Number of children under 2 reached with		\$1.151 billion without global costs.		
appropriate package of nutrition interventions in		\$30/child under two/over three years from		
priority countries (based on rationale noted to the		pregnancy to 24 months=1.151		
right)	12.7	billion/\$90=12.7 million children		
Proportion of children under 2 reached (= number				
of children under 2 reached with package of				
nutrition interventions in priority countries / number				
of children under 2 in priority countries)	0.39			
Number of children under 5 (million) reached in				
priority countries (= proportion of children under 2				
reached * number of children under 5 in priority				
countries)	31.04			

IMPACT ON STUNTING	
Prevalence of stunting < 5 in absence of	
intervention (Based on baseline data taken from	
Demographic and Health Surveys indicate the	
average (not-weighted) prevalence)	0.44
# < 5 stunted in population reached in absence of	
interventions (=number of children under five	
reached in priority countries * prevalence of	
stunting <5 in absence of intervention)	13.7

Prevalence of stunting < 5 with intervention (based	
on anticipated 35% reduction in prevalence as	
documented in Lancet 2008 series on maternal &	
child nutrition) (= prevalence of stunting <5 in	
absence of intervention * 0.65)	0.29
# < 5 stunted (millions) in population with	
intervention (= # of children <5 reached in priority	
countries * prevalence of stunting <5 with	
intervention (0.29))	8.9
# of cases of stunting prevented (million) (= #<5	
stunted in population in absence of intervention -	
#<5 stunted in population with intervention)	4.8
Per year (= # of cases stunting prevented (million) /	
number of fiscal years 5)	0.96

^{**}Basline populations are from FTF priority countries (minus Nicaragua, Honduras, Tajikistan)

^{**}Baseline populations do not include India. We plan to invest N funds in UP and J, home to 30 million children, but would not anticipate being able to reach scale and did not want to drastically inflate numbers.