

Report on embargo until 30 October, 2013

# The Cost of **HUNGER** in **AFRICA**

Social and Economic  
Impact of Child  
Undernutrition  
in Egypt, Ethiopia,  
Swaziland and  
Uganda



**Abridged Report**

**Implications for the Social and Economic  
Transformation of Africa**



African Union



NEPAD  
A PROGRAMME OF THE AFRICAN UNION



World Food Programme



United Nations  
Economic Commission for Africa

## Cost of Hunger in Africa (COHA)

### WFP Executive Board Briefing

November 2013



# The time for Africa is now

Most important economic expansion period in the last 30 years. Yet, it is not enough

Shift from a commodity-driven growth strategy, diversified , industrialization and integration of products into national and regional value chains.

- Youth population with decent labour opportunities in economic activities that will also help Africa move towards a more industrialized and urbanized society that builds on the continent's comparative advantages.

Focus on ensuring human capital growth through improved health, education and labour productivity.

- The gap in access to health services between the rural and urban population must be. The continent cannot afford the losses in human capital associated with poor health and its consequences to society.

Implications of urbanization in Labour Markets

- Africa, having the highest percentage of youth, with over 40 percent of the population in sub-Saharan Africa under the age of 15, stands to gain important human capital by reducing dropout rates in schools and increasing the educational levels.

The Cost of Hunger in Africa (COHA) study demonstrates that the transformation agenda for Africa cannot effectively be achieved without addressing child undernutrition.

# Global Momentum for Nutrition

“Nutrition for Growth” - Global Nutrition for Growth Compact - committed their countries and organizations by 2020 to:

- improving the nutrition of 500 million pregnant women and young children
- reducing the number of children under five who are stunted by an additional 20 million
- saving the lives of at least 1.7 million children by preventing stunting, increasing breastfeeding and better treatment of severe and acute malnutrition

The launch of the Second Lancet series on Maternal and child Nutrition

The World Bank also announced increased support for nutrition – (3) \$600 million in 2013-2014, up from \$230 million in 2011-2012.

The Sixty-sixth World Health Assembly - WHO- Prevention and Control of Non communicable diseases

# A BRIEF RECAP OF THE COHA



**Resolution 898(XLV)**

5th Joint Meeting of the AU Conference of Ministers of Economy and Finance and the ECA Conference

E/ECA/CM/4.5/Rev.1  
AUCAMEF/EXP/Rpt(VII)/Rev.1  
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**The Cost of Hunger on Social and Economic Development**

The Conference recognizes that the cost of hunger is not only a matter of public health, but also of broader social and economic implications for the continent's potential.

**Noting** further that the continent's potential is being hampered by recurrent episodes of drought, floods, and other natural disasters, and the resulting loss of lives and livelihoods, and the increasing incidence of chronic hunger and malnutrition, and the resulting loss of lives and livelihoods, and the increasing incidence of chronic hunger and malnutrition;

**Stressing** that the cost of hunger is a major constraint on the continent's economic and social development, and that it is essential to take urgent action to address this issue;

**Appreciating** the comprehensive and collaborative approach adopted by the African Task Force on Food and Nutrition Development, and the technical support provided by the United Nations Economic Commission for Latin America and the Caribbean, as an excellent illustration of South-South cooperation;

**Noting** the damaging impact of chronic hunger and malnutrition on the continent's economic and social development, and the resulting loss of lives and livelihoods, and the increasing incidence of chronic hunger and malnutrition;

**Affirming** the need to take urgent action to address this issue, and to ensure that the continent's economic and social development is not hampered by the cost of hunger;

**Commending** the African Task Force on Food and Nutrition Development, and the technical support provided by the United Nations Economic Commission for Latin America and the Caribbean, as an excellent illustration of South-South cooperation;

**Recognizing** the need to take urgent action to address this issue, and to ensure that the continent's economic and social development is not hampered by the cost of hunger;

**Recognizing** the need to take urgent action to address this issue, and to ensure that the continent's economic and social development is not hampered by the cost of hunger;

1. Urges member States to intensify their efforts and investments to address acute and chronic hunger, applying the principles and priorities put forward in the African Regional Nutrition Strategy and Comprehensive Africa Agriculture Development Programme;
2. Requests the African Union Commission and the Economic Commission for Africa to intensify their support for these efforts and investments by member States;
3. Welcomes the multi-country study on the cost of hunger in Africa being led by the African Union Commission and the Economic Commission for Africa, in collaboration with the World Food Programme, to quantify the aggregate social and economic impacts of chronic hunger in Africa;
4. Anticipates that the study will lead to increased understanding among key national and regional policymakers of the depth and breadth of child undernutrition on the continent, and its aggregate social and economic consequences, and thereby establish a firmer foundation for policies and investments to cut hunger in Africa;
5. Commends the consultative process through which the study is being implemented, in particular the technical oversight role of the African Task Force on Food and Nutrition Development;
6. Notes that the African Task Force on Food and Nutrition Development has endorsed the methodology being applied in the study;
7. Acknowledges the technical support for the study being provided by the United Nations Economic Commission for Latin America and the Caribbean, as an excellent illustration of South-South cooperation;
8. Takes note of the preliminary results of the study indicating potentially large aggregate social and economic impacts of child undernutrition in African contexts;
9. Requests the African Union Commission and the Economic Commission for Africa, in collaboration with the World Food Programme, to expedite the successful completion of the study, including wide dissemination of the results at country and regional levels; and
10. Urges member States and partners participating in the study to provide the necessary resources for the successful completion of the study.



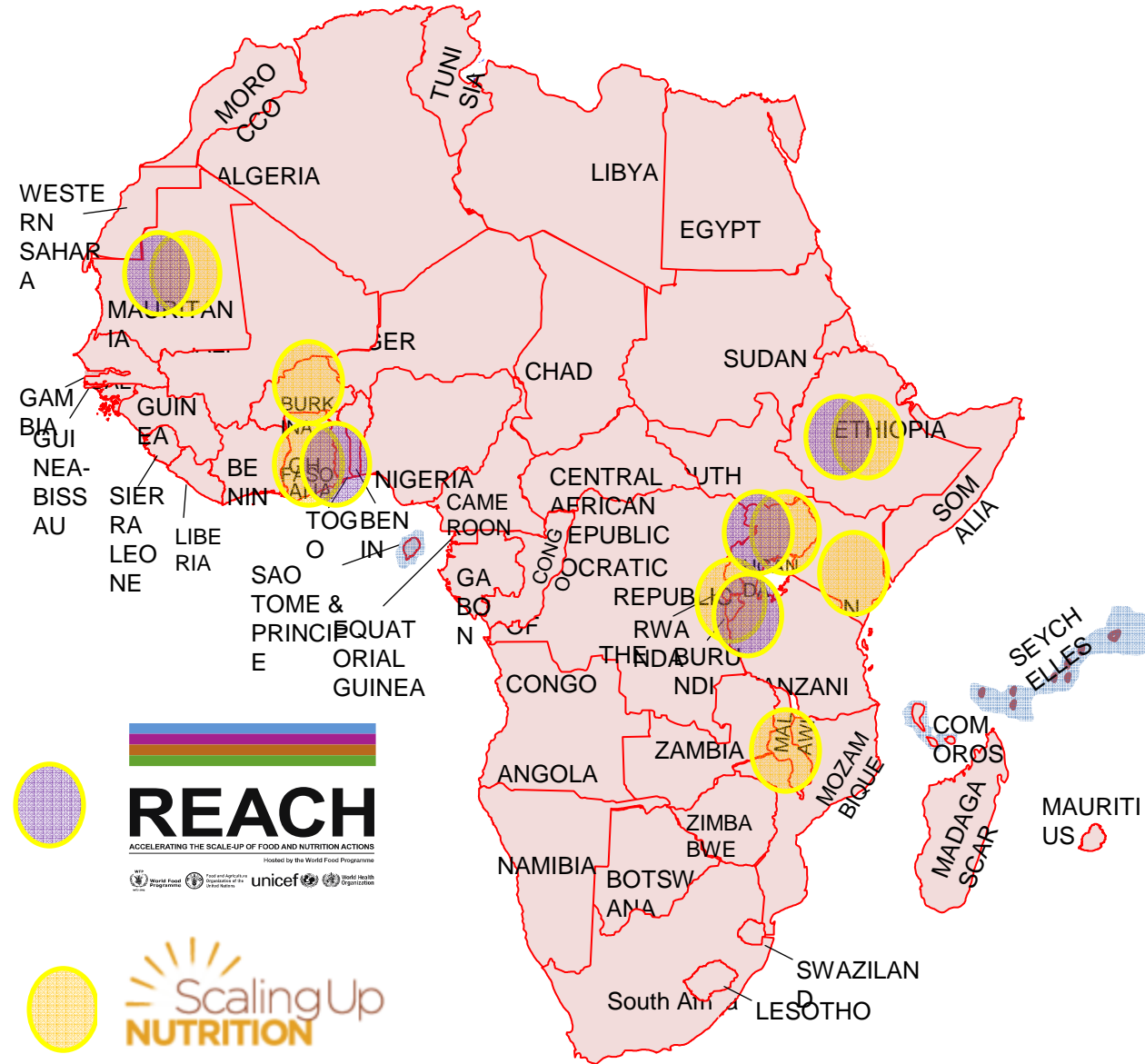
# 12 Initial Participating Countries

## 4 Pilot Countries

Egypt  
Swaziland  
Ethiopia  
Mauritania

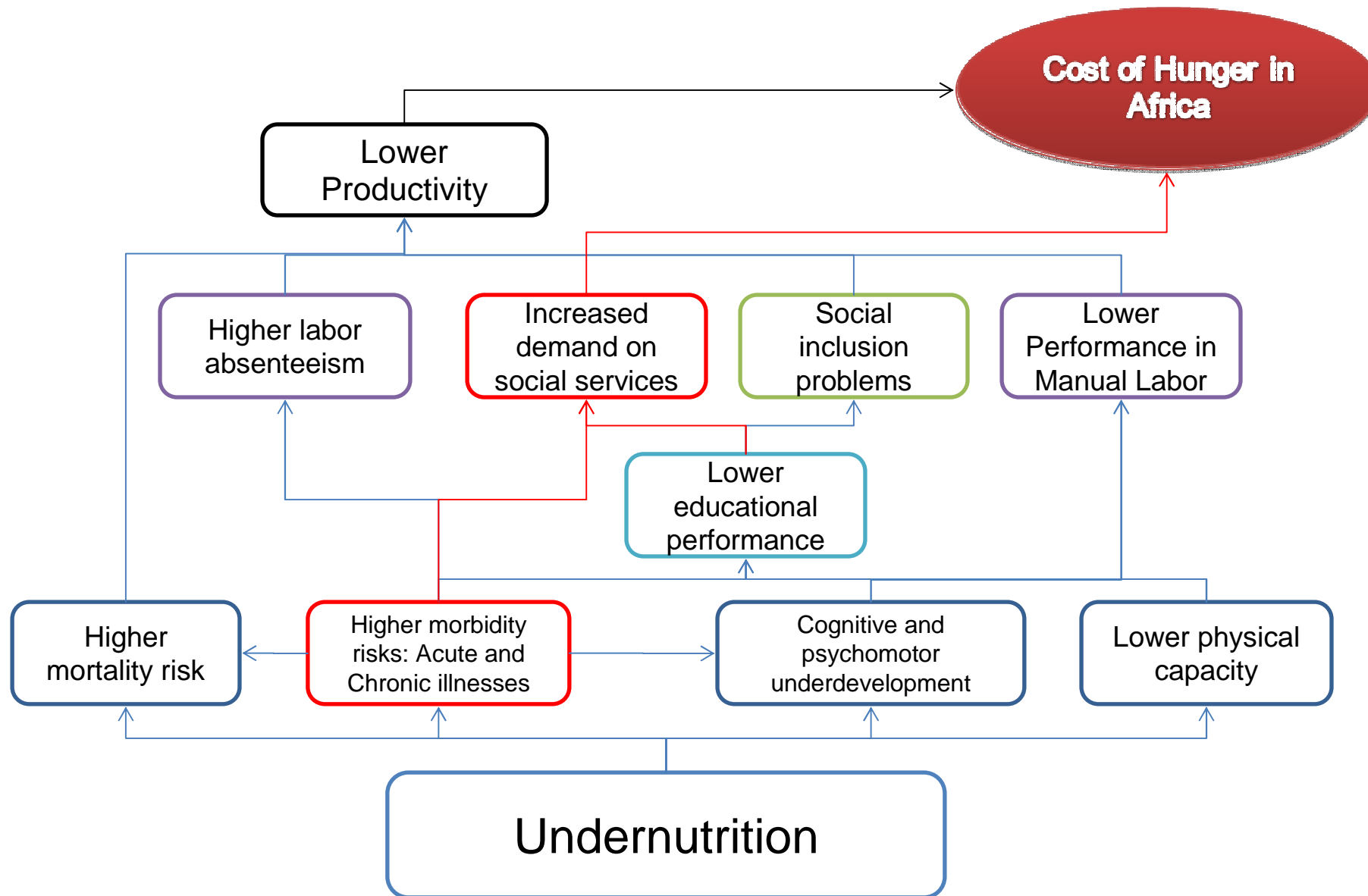
## 8 Roll-out Countries

Burkina Faso  
Ghana  
Botswana  
Malawi  
Mauritania  
Rwanda  
Kenya  
Cameroon



This map was produced as a reference aid only. The boundaries and names shown and the designations used on this map do not imply official endorsement or

# Framework for the Cost of Hunger in Africa



# Variables and Indicators

## Risk

**Probability differences (DP or DP):** is the difference between the probability that a consequence (i) happens between undernourished ( $P^U$ ) and non-undernourished ( $P^{NU}$ ).

$$\Delta P_i = P_i^U - P_i^{NU}$$

**Probability Ratio (PR):**

$$RP_i = P_i^D / P_i^{ND}$$

**Probability Odds (PO):**

$$OP_i = P_i^D / (1 - P_i^D)$$

**Odds Ratio (OR):**

$$OR = (P_i^D / (1 - P_i^D)) / (P_i^{ND} / (1 - P_i^{ND}))$$

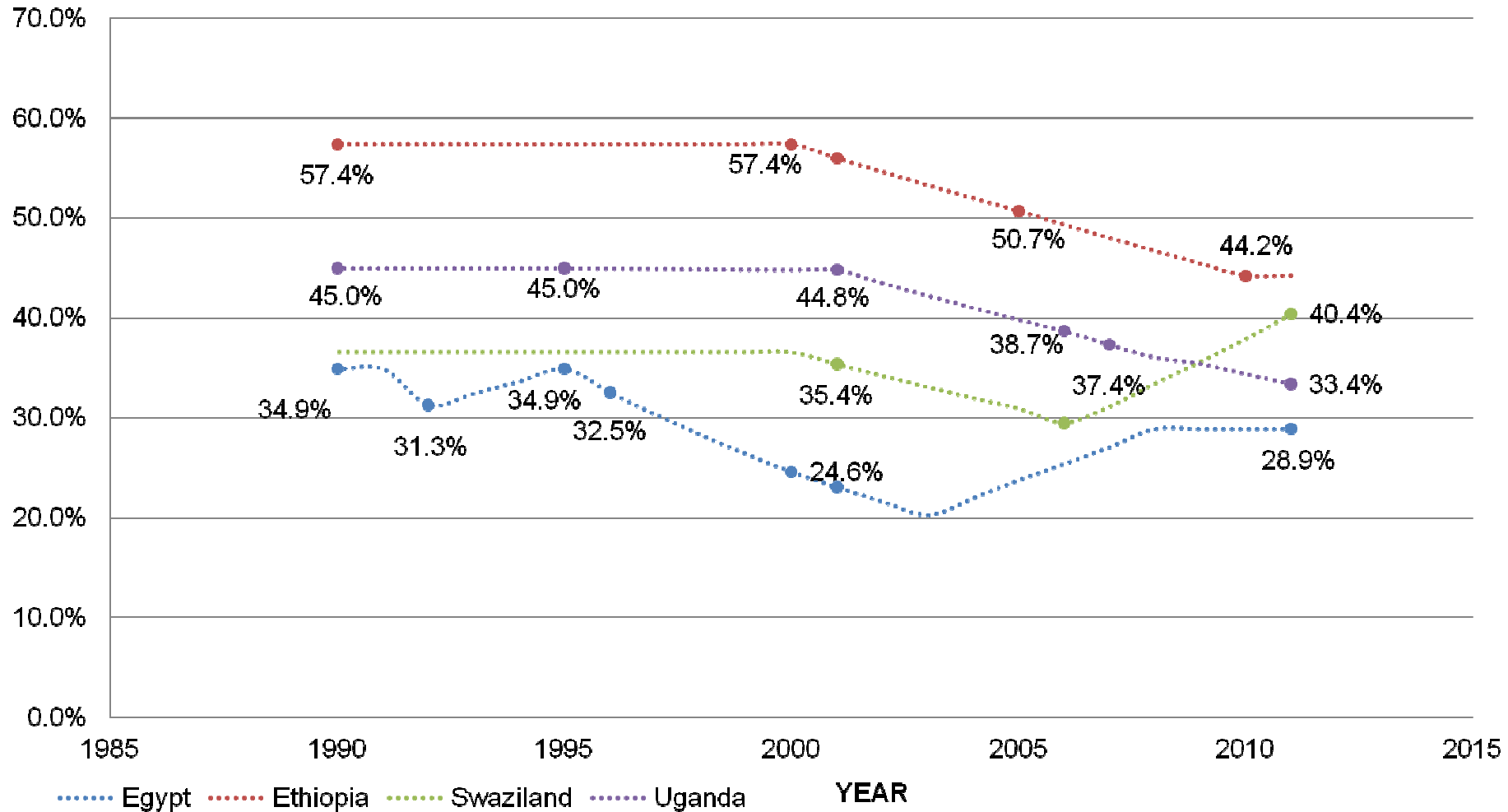
For:

- ✓ **Mortality:**  $DP_{MM}$  or **DMM**
- ✓ **Morbidity:**  $DP_M$  or **DM**
- ✓ **Repeated grades:**  $DP_r$  or **Dr**
- ✓ **Drop out of educational system:**  $DP_d$  or **Dd**
- ✓ **Proportions in each educational level :**  $DP_e$  or **De**
- ✓ **Schooling years or school level:**  $DP_E$  or **DE**
- ✓ **Productivity in Manual Labour:**  $DP_{ML}$  or **DML**

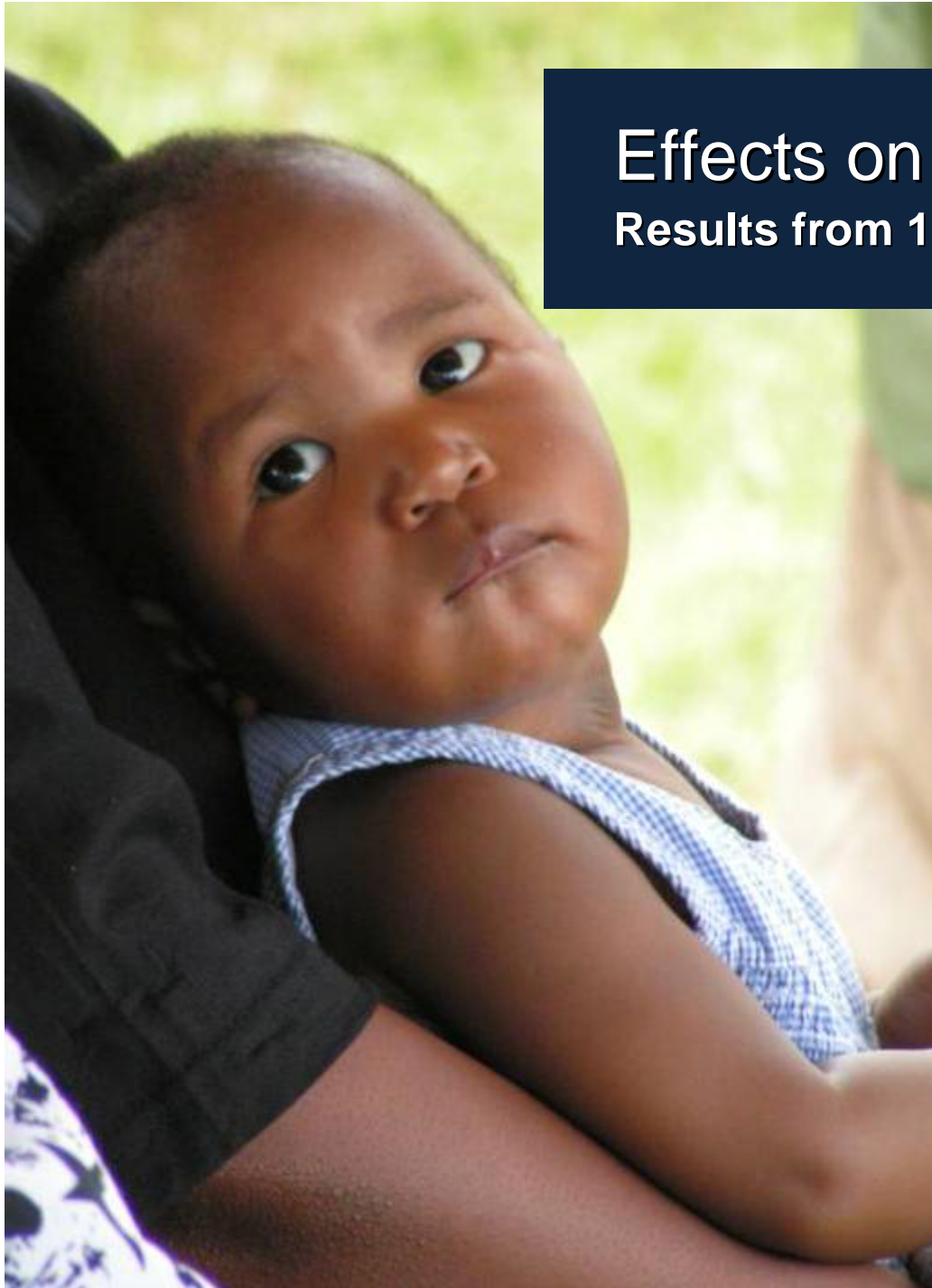
# Presentation of Results

The following data are the result of the work carried-out by a national implementation team that collected, processed and analyzed official data, and supported the adaptation of the model to estimate the social and economic impact of child undernutrition in Africa.

# Tendencies in the Prevalence of Stunting



Source: Prepared in-house based on information from WHO Child Nutrition Database and National Surveys. Data prior to 2006, has been updated in line with new Child Growth Standards introduced by WHO in 2006 to replace the 1977 International Growth Reference, formulated by the National Center for Health Statistics (NCHS).



## Effects on **HEALTH**

Results from 1<sup>st</sup> Phase Countries

***Malnutrition*** in children predisposes to a variety of health and developmental risks that can be reversed if tackled at the early stages of a child's life.

**For every additional case of child illness, both the families and health system and are faced with additional economic costs.**



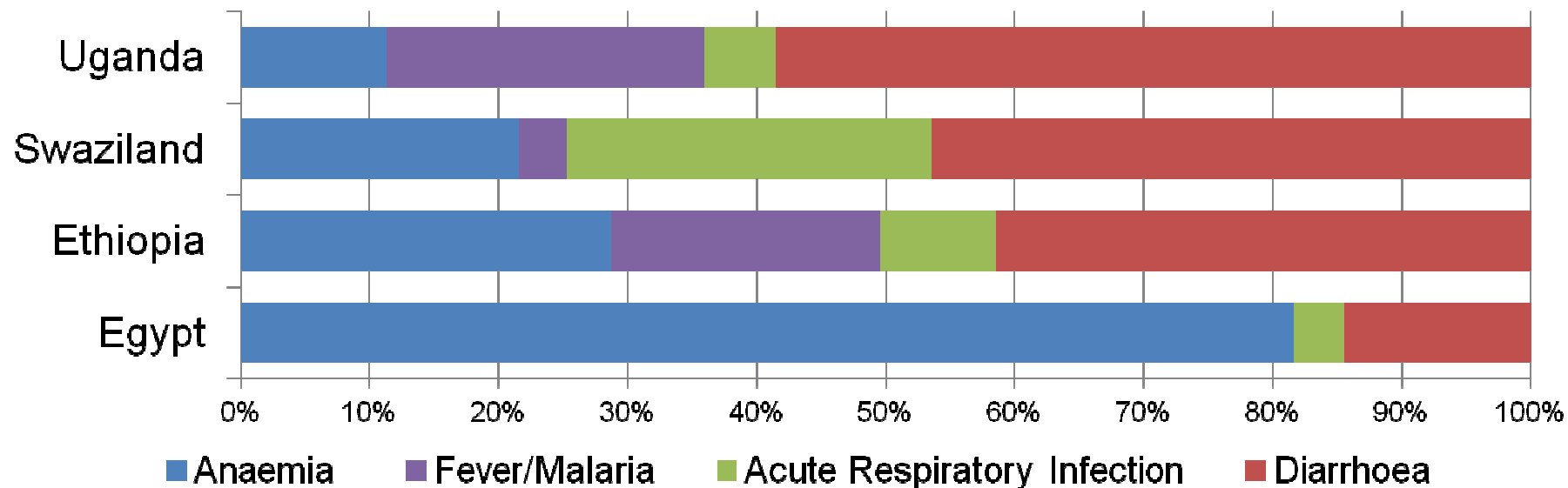
# Incremental morbidity associated with underweight children

**EGYPT**  
 Underweight children: 659,000  
 Incremental morbidity Episodes: 901,440  
 Economic Cost: US\$213 million

**ETHIOPIA**  
 Underweight children: 3.0 million  
 Incremental morbidity Episodes: 4.4 million  
 Economic Cost: US\$155 million

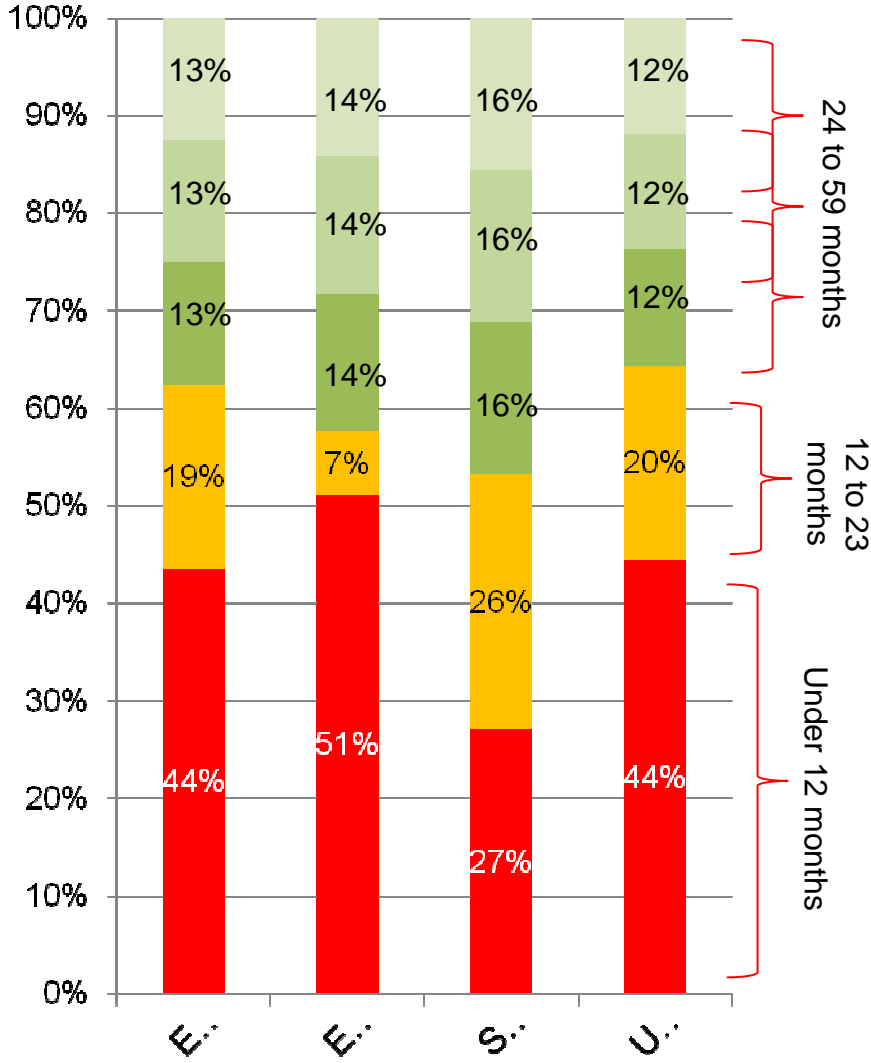
**SWAZILAND**  
 Underweight children: 9,645  
 Incremental morbidity Episodes: 25,446  
 Economic Cost: US\$7 million

**UGANDA**  
 Underweight children: 975,000  
 Incremental morbidity Episodes: 1.6 million  
 Economic Cost: US\$254 million

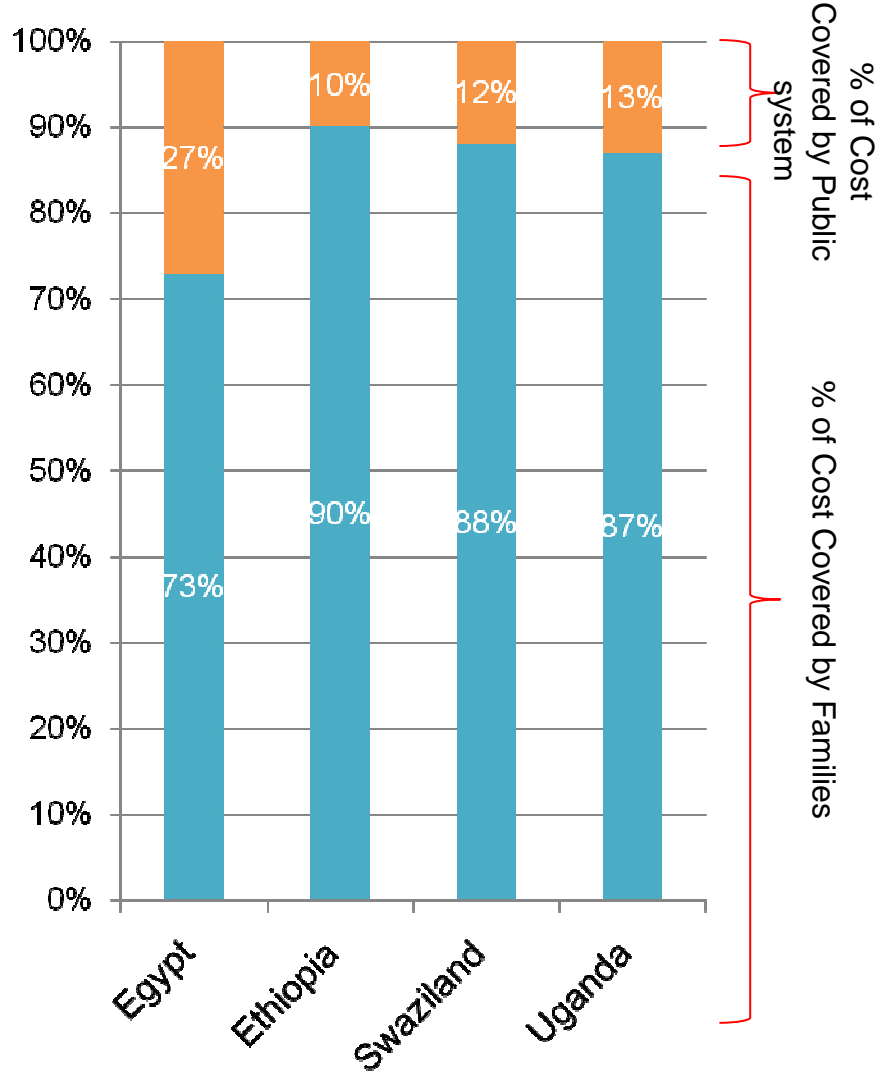


# Distribution of Health Costs

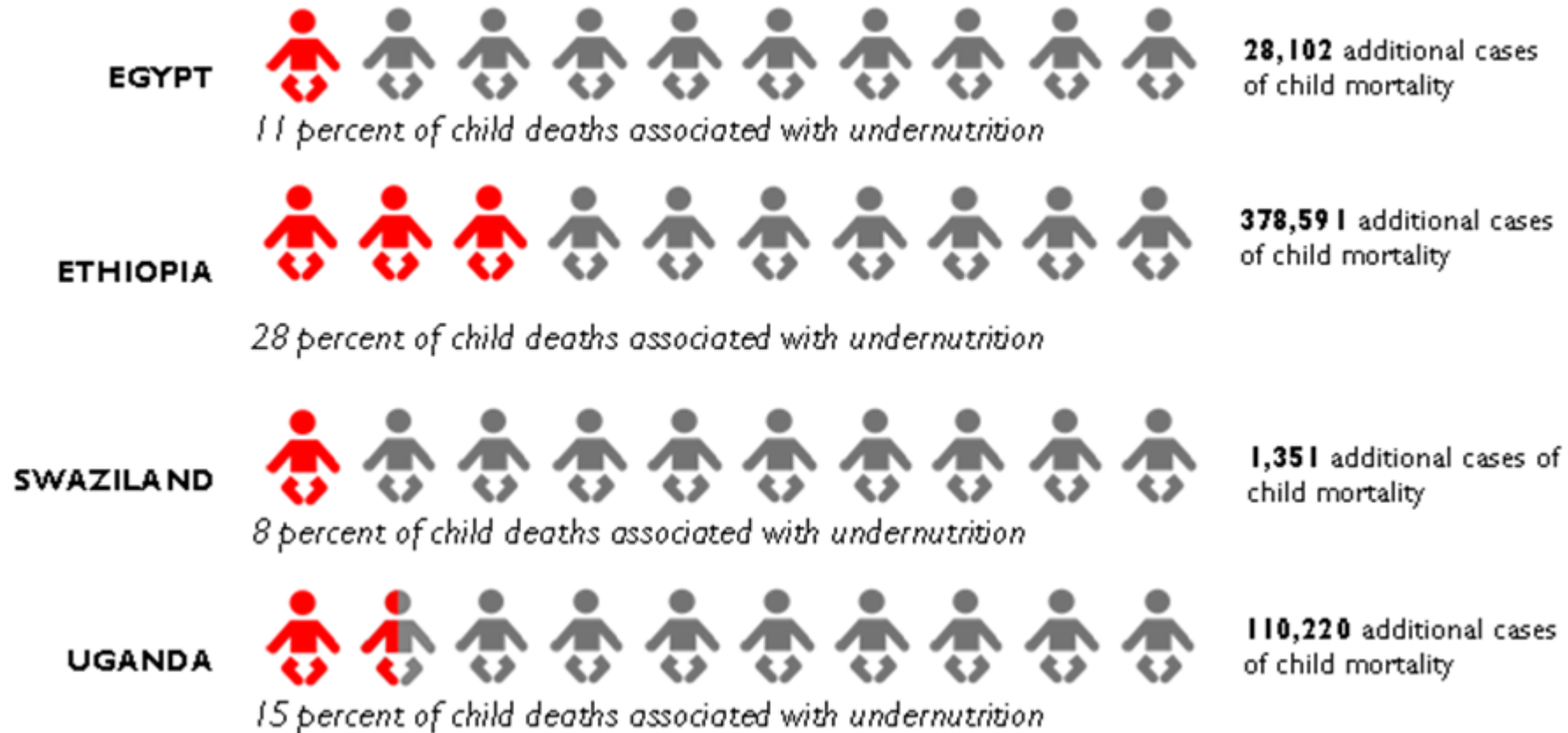
## By Age Groups



## Public and Private



# Incremental child mortality associated to underweight children





**An child who is undernourished, is at risk of suffering from cognitive and physical impairment, which impacts the quality of life as an child and an adult within the society.**

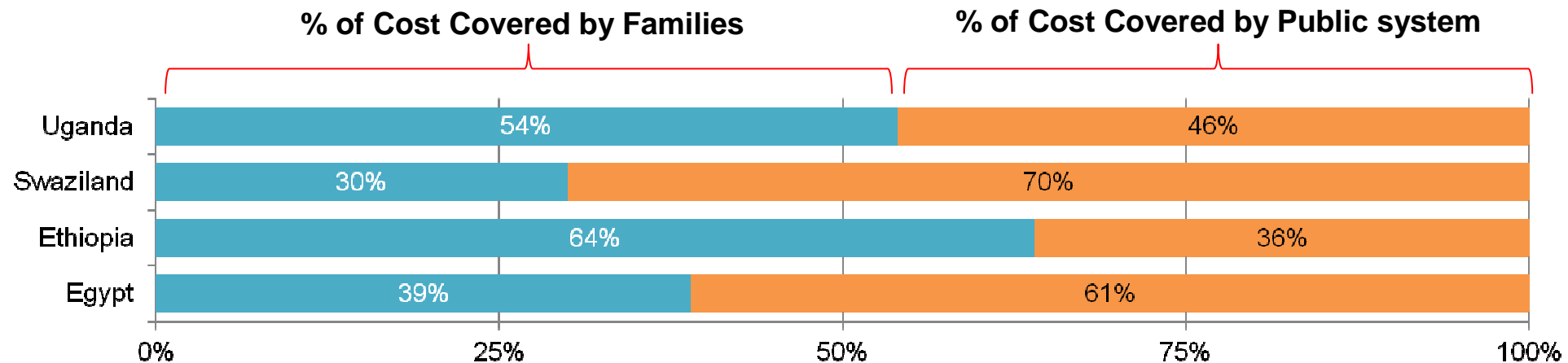
**Stunted children are more likely to repeat grades in school or even drop out.**

**Effects on EDUCATION**  
Results from 1<sup>st</sup> Phase Countries

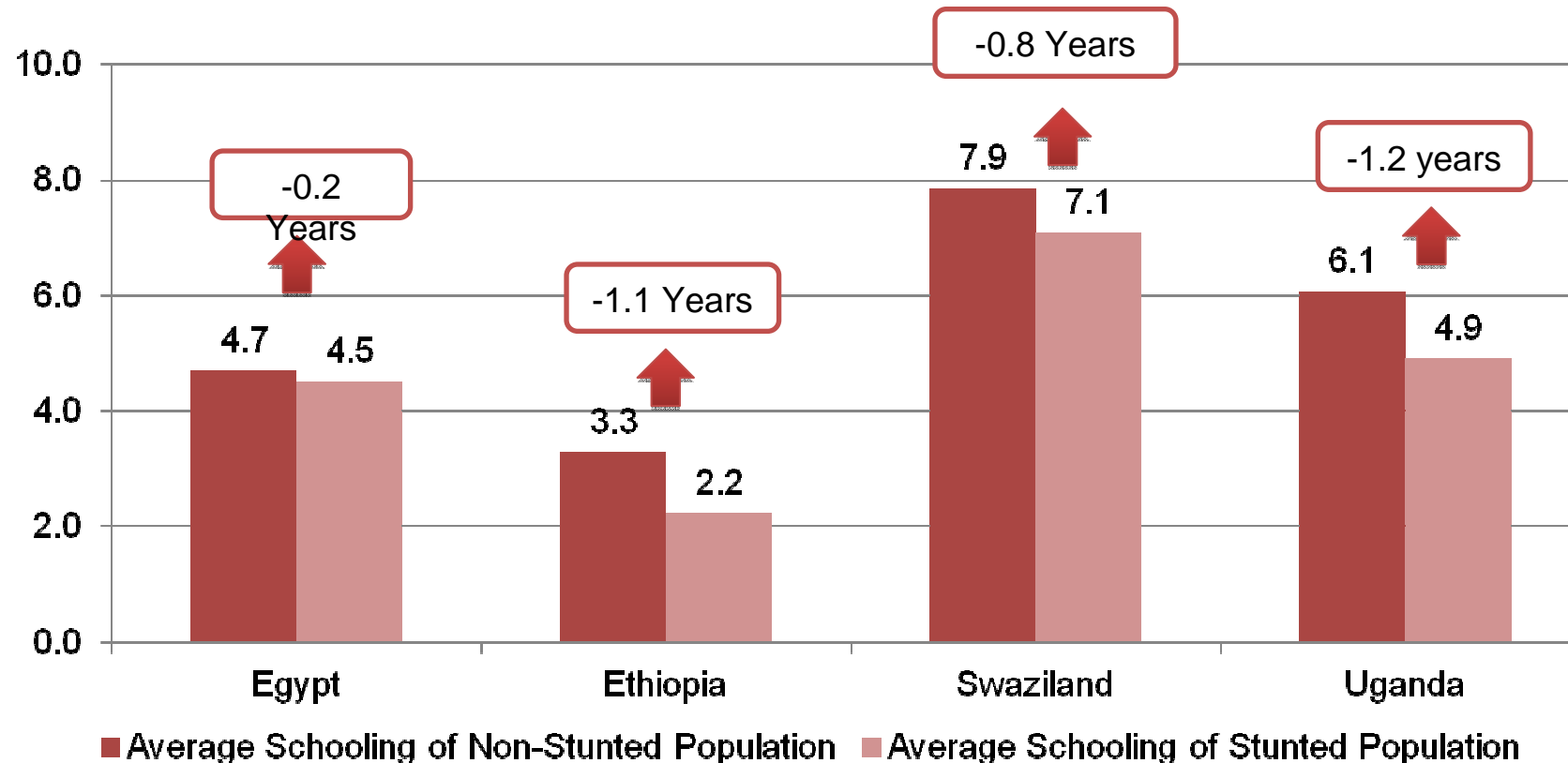
# Economic Cost of Grade Repetition of Stunted Children

Pilot Country	Stunted School-age Population (5-18 years)	Total Reported Grade Repetition (2009)	% of Repetitions Associated with stunting	Number of Repetitions associated with stunting (2009)	% of Repetition in Primary Education	Economic Cost	
						Local Currency	USD (in millions)
Egypt	7.9 million	830,603	9.6%	79,391	59%	EGP 271 million	49
Ethiopia	17.5 million	963,599	16%	152,488	100%	ETB 93 million	8
Swaziland	168 thousand	47,371	12%	5,550	86%	SZL 6 million	1
Uganda	5.8 million	1.8 Million	7.3%	133,931	96%	UGX 20 billion	9.5
Total					90%		

\* Primary education only. No data for secondary education.



# Estimations in Schooling Differential of Working Age Population



Source: UNECA, based on the official household surveys in each country.

Note: Schooling achievement based on information of head of household. It does not represent the schooling level of the population.

The higher risk of stunted children on dropping out of school resulted in lower schooling of the stunted population that ranged from **-0.2 to -1.2 years**



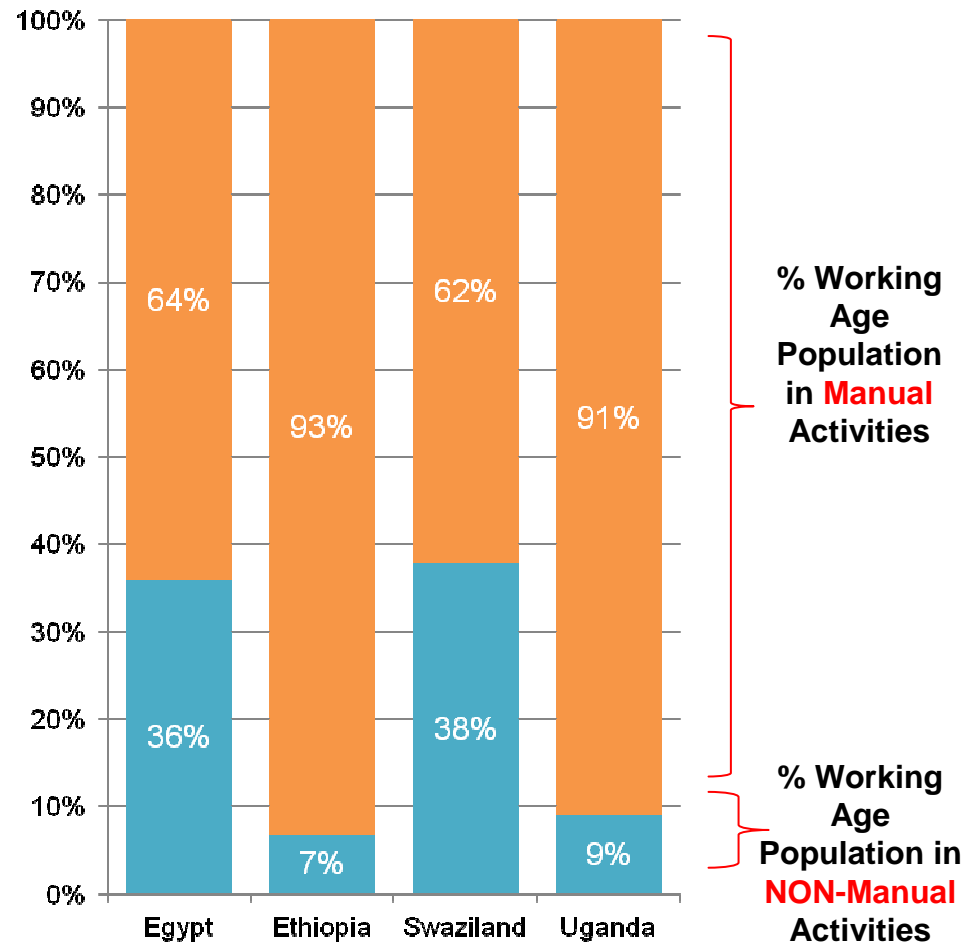


Theory indicates that when a child is stunted, this will impact them when they enter the labour force. **On the whole, stunted workers are less productive than non-stunted workers, and are less able to contribute to the national economy.**

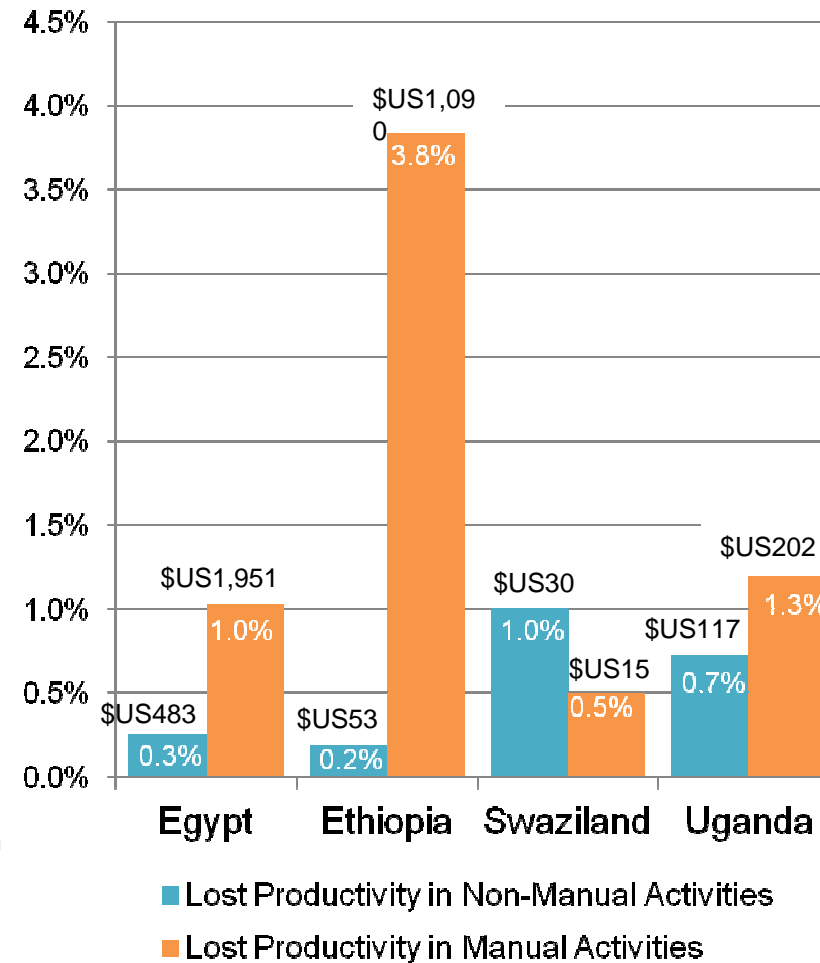
Effects on **PRODUCTIVITY**  
Results from 1<sup>st</sup> Phase Countries

# Economic Impact of Child Undernutrition in Productivity of Working Age Population

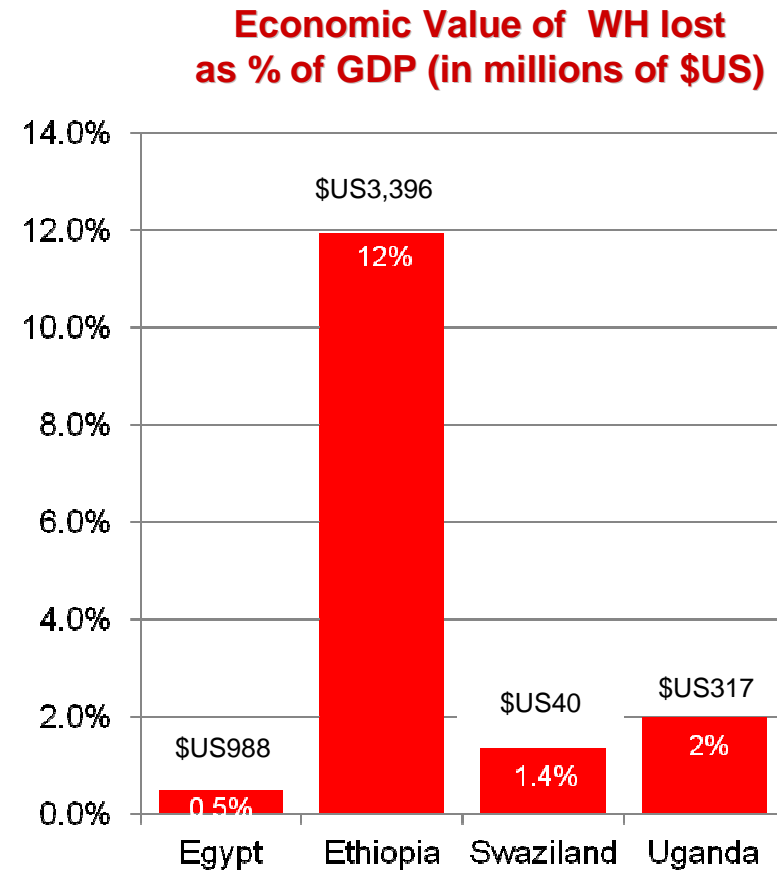
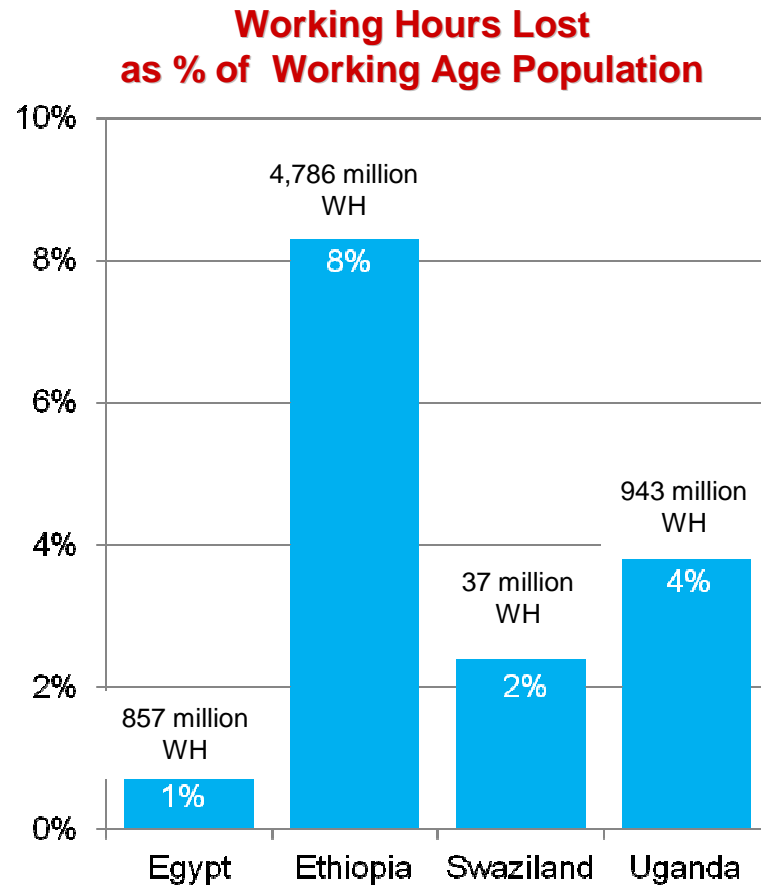
**Distribution of Manual and Non-Manual Labour**



**Losses in Productivity by type of Labour (in millions of \$US)**



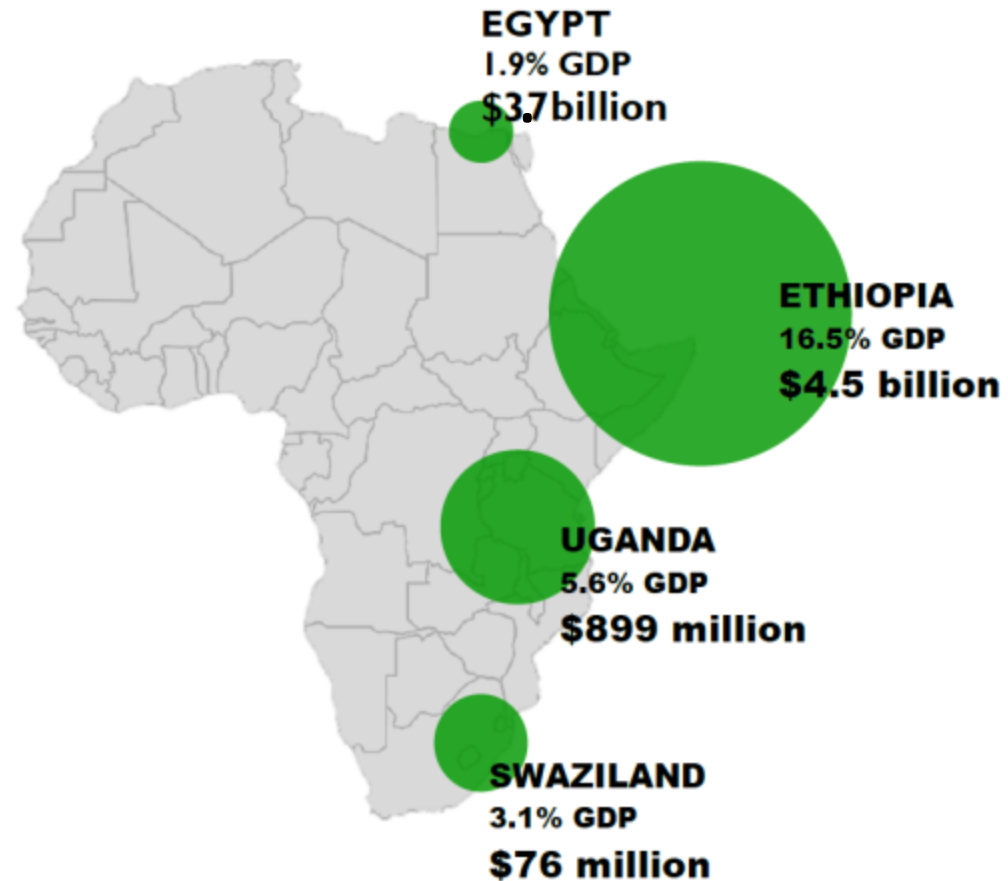
# Impact of child mortality on working age population



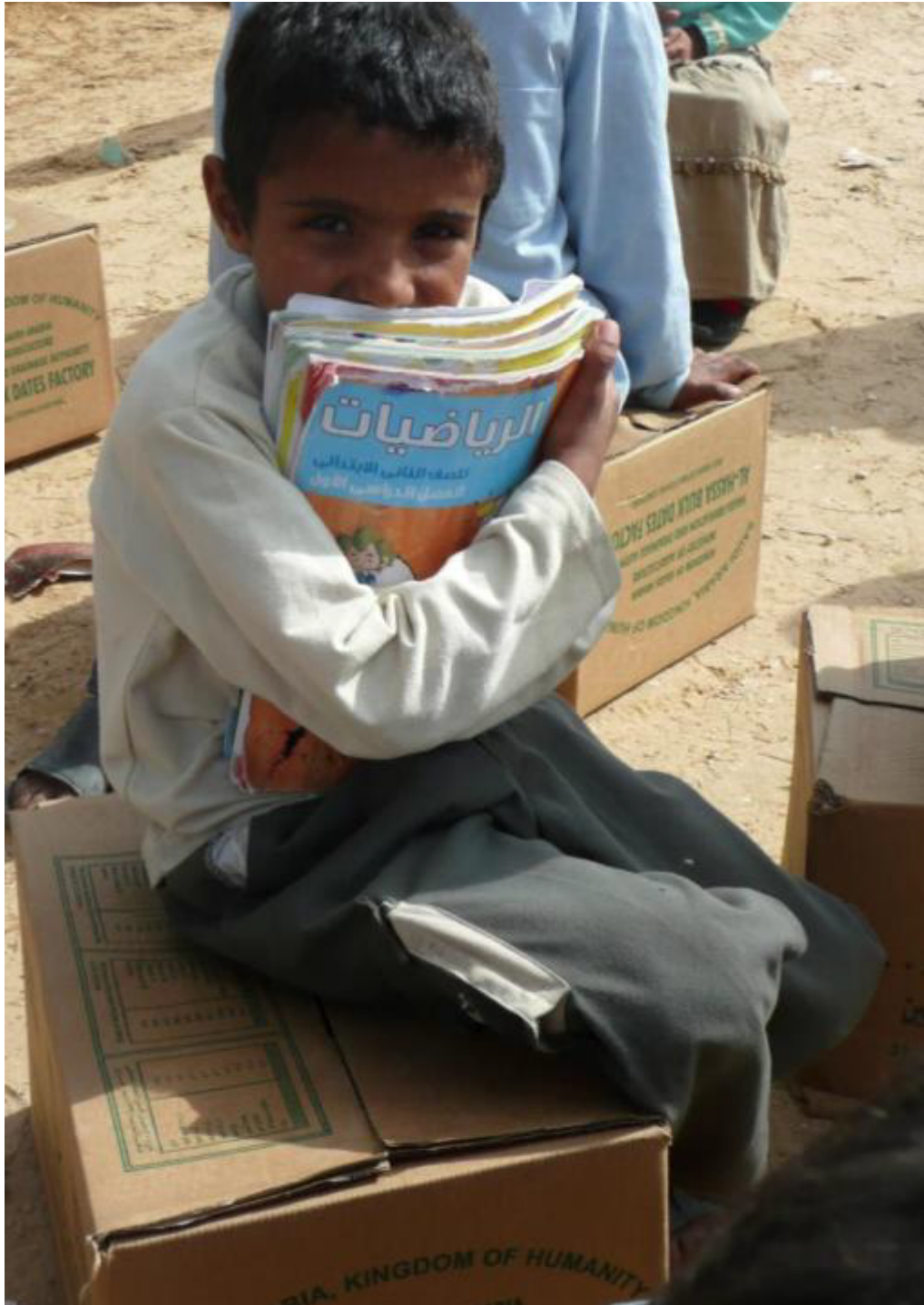
The impact of undernutrition on child mortality rates increases in countries with higher prevalence. A percentage of the WAP is absent from the economy due to incremental risk associated to undernutrition

# Economic Impact of Child Undernutrition

Country	Losses in Local Currency	Annual Losses in USD
Egypt	EGP 20.3 billion	<b>\$3.7 billion</b>
Ethiopia	ETB 55.5 billion	<b>\$4.5 billion</b>
Swaziland	SZL 783 million	<b>\$76 million</b>
Uganda	UGX 1.8 trillion	<b>\$899 million</b>



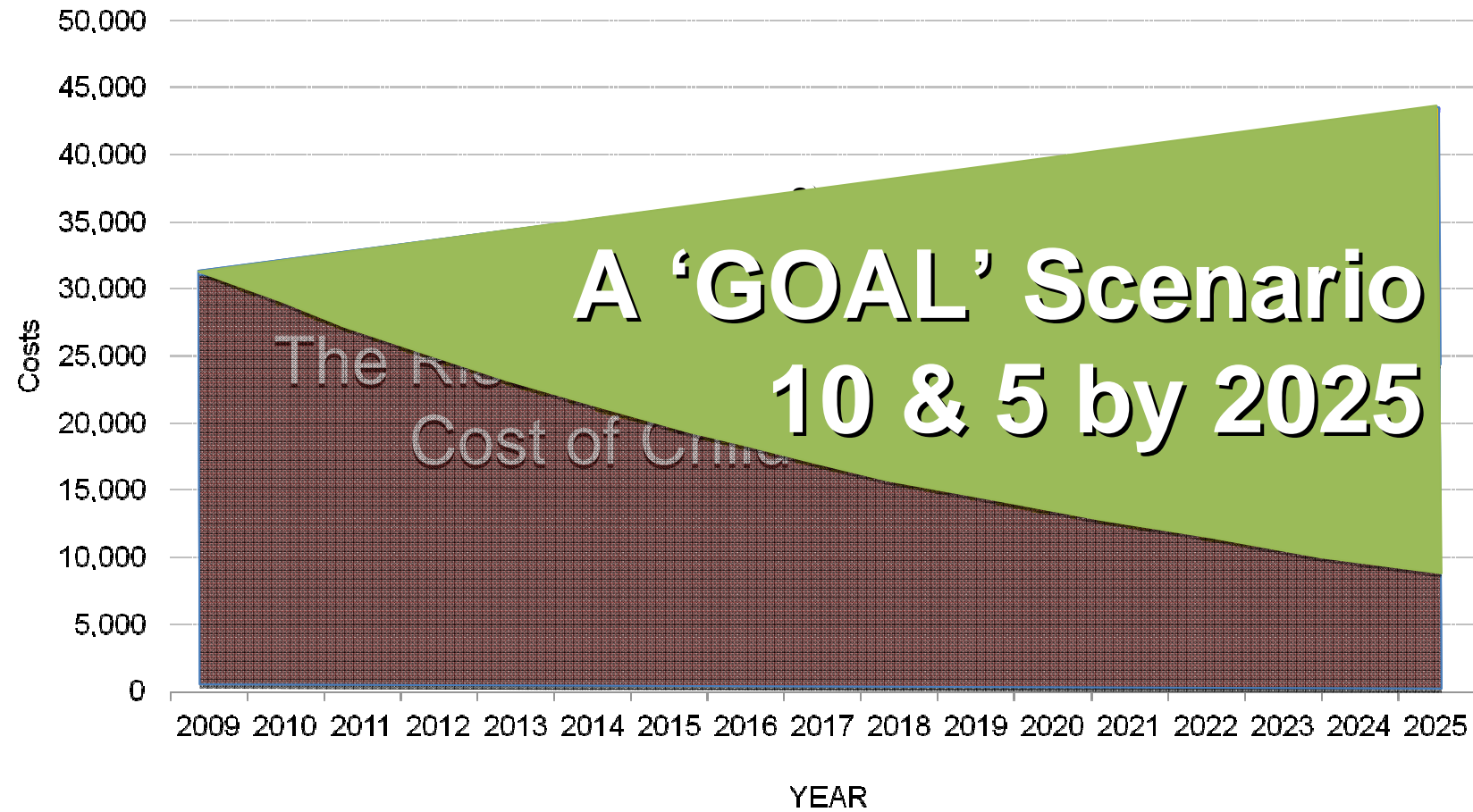
The aggregate cost estimation for Health, Education and Productivity are equivalent to between **1.9% to 16.5% of GDP**



**What are the potential savings of a reduction in child stunting prevalence?**



# Potential Savings of Reducing Child Undernutrition



— BASELINE

- - - Scenario 1. Cutting by Half

— Scenario 2. 'Goal' Scenario

Scenario



# Summary of Savings Scenarios

Country	Average Annual Savings	
	Scenario #1: Halving the Prevalence of Child Undernutrition by 2025	Scenario #2: The 'Goal' Scenario: "10 % Stunting and 5% Underweight by 2025"
Egypt	US\$133 million	US\$165 million
Ethiopia	US\$376 million	US\$784 million
Swaziland	US\$3 million	US\$4 million
Uganda	US\$88 million	US\$131 million

Note: All estimations are based on the period from 2009 to 2025.

# 10 Findings from the First Phase of the Cost of Hunger in Africa Study \*

1

• Today, there are more stunted children in Africa than 20 years ago

2

• 69 to 82 percent of all cases of child undernutrition go untreated

3

• Most of the health costs associated with undernutrition occur before the child turns one year old

4

• Between 7 to 16 percent of repetitions in school are associated with stunting

5

• Stunted children achieve 0.2 to 1.2 years less in school education

6

• 8 to 28 percent of all child mortality in is associated with undernutrition

7

• Child mortality associated with undernutrition has reduced workforces by 1 to 8 percent

8

• 40 to 67 percent of the adult population suffered from stunting as children

9

• The annual costs associated with child undernutrition reach values equivalent to 1.9 to 16.5 percent of GDP

10

• Eliminating stunting in Africa is a necessary step for inclusive development on the continent.

\* based on the results from 4 pilot countries

# Policy Recommendations

Stunting is a useful indicator to evaluate effective social policies

Strong political will should be reflected in aggressive goals

A multi-causal problem requires a multi-sectoral response

Efficient rural economies and effective social protection schemes are key drivers for the sustained reduction of child undernutrition

Sustainability requires strong national capacity

Monitoring is needed for progress

Long-term commitment is necessary to achieve results

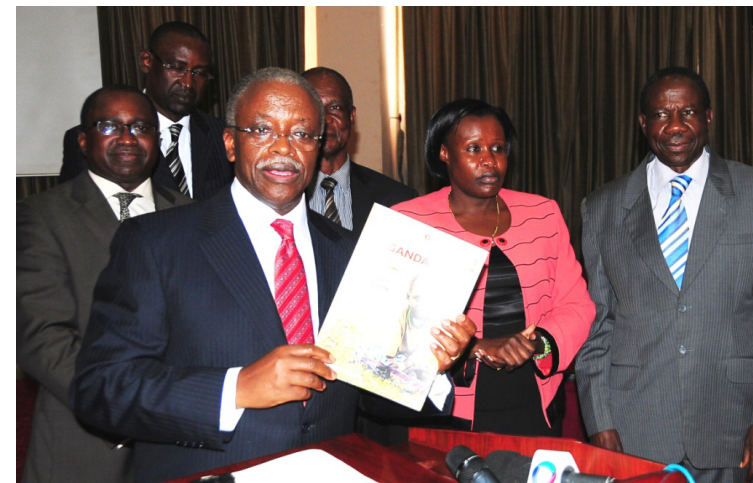
**ARISE 2025**

**“Child hunger is a moral issue. But as this study demonstrates, it is also a critical economic concern.**

These findings amount to ~~nothing short of~~ a **call to action**.”

Secretary-General of United Nations  
Panama City, June 2007

“The Cost of Hunger Study provides us with the evidence-base for building a case for food security, communication, advocacy and policy discourse on nutrition. The study reveals that **we can no longer afford to have high prevalence rates of under-nutrition and has given the justification for increasing**



**Prime Minister Amama Mbabazi of Uganda, Launching of COHA Uganda**  
Kampala, June 2012