



IYCN USAID's Infant  
& Young Child  
Nutrition Project

# Maximizing Nutritional Benefits of Agricultural Interventions

Do good, but above all do no harm

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Photo: Aurelio Ayala III

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# The Infant & Young Child Nutrition Project

- USAID Global Health Bureau flagship project on infant and young child nutrition.
- Aims to prevent malnutrition for mothers and children during the critical time from pregnancy until two years of age.
- Led by PATH in collaboration with CARE, The Manoff Group, and University Research Co., LLC.



Photo: PATH/Evelyn Hockstein

# Does Nutrition Matter?

- Malnutrition causes:
  - One third of all child deaths
  - Delayed cognitive development and lifelong deficit
  - Reduced school performance
  - Behavioral problems
  - Reduced adult productivity

# Economic Impacts

- Cognitive deficit from severe malnutrition (wasting and stunting) observed as late as adolescence (Grantham-MacGregor, 1995; Mendez and Adair, 1999)
- Short stature (reflects childhood stunting) associated with a 14% loss in lifetime earnings (Alderman, Hoddinott and Kinsey, 2006)
- Each 1% increase in adult height is associated with a 4% increase in agricultural wages (Haddad and Bouis, 1991)

## Economic impact of micronutrient deficiency (Horton and Ross, 2003)

- Iron deficiency (motor/mental impairment in children, adult productivity loss) results in a loss 4% of GDP in 10 low-income countries
- Eliminating anemia is associated with a 5-17% increase in adult productivity, especially for heavy labor.

# All Types of Malnutrition

Victora et al for *The Lancet* (2008)

- *We provide strong evidence that adequate nutrition in utero and in the first 2 years of life is essential for formation of human capital.*
- *Under nourished children are more likely to become short adults, to have lower educational achievement, and to give birth to smaller infants.*
- *Undernutrition is also associated with lower economic status in adulthood.*

# The 1000 day “Window of Opportunity”



Photo: PATH/Evelyn Hockstein

# Why IYCN Project and Agriculture?

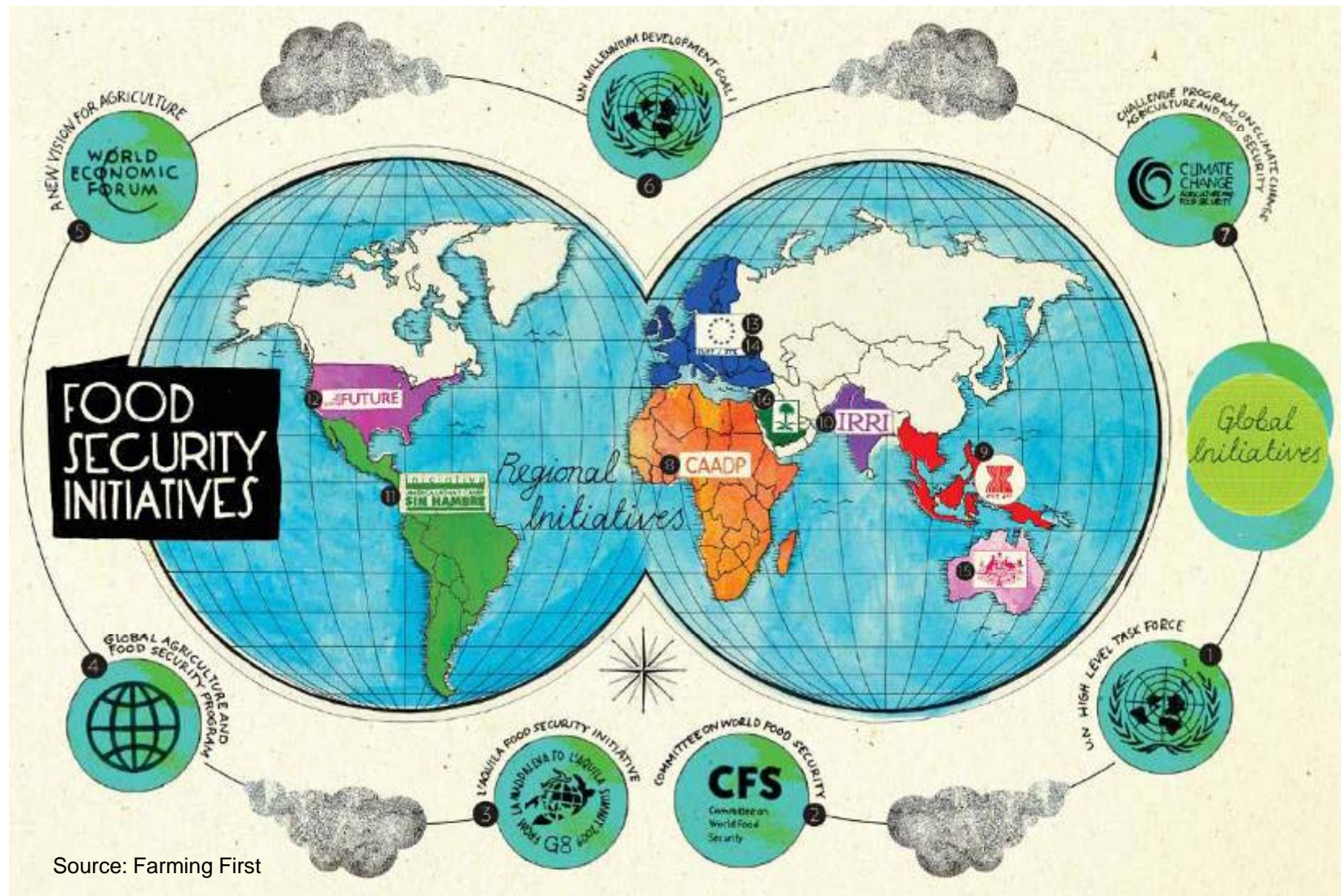
- Protect nutritionally vulnerable groups.
- Ensure interventions promote improved nutrition.
- Avoid working at cross purposes.
- Build capacity among our staff to advise on agriculture and nutrition.



Photo: PATH/Nicole Racine



# A New Era for Agricultural Development



# Does Increased Agricultural Production Improve Nutrition?

“...one of the most persistent of misperceptions...about technology and economics...is the idea that as long as production is rising, any problems of consumption will sort themselves out.”

**Pacey and Payne, 1985**



# Does Increased Income Improve Nutrition?

Not everything can be bought...

Health



Education



Clean Water



Gender Equality



Photos: PATH

“Income is a rather dubious indicator of the opportunity of being well nourished....” (Drèze and Sen, 1989)

# Problem

*There are trade offs and complementarities between production/employment goals and meeting nutritional goals which should be taken into account...when making program decisions. (USAID, 1982)*

- How can we maximize the complementarities?
- How can we minimize the tradeoffs?

# Review of Experience

- What are the characteristics of agriculture interventions that:
  - Improve food security?
  - Improve nutrition?
- What are the characteristics of interventions that have negative effects?

# Negative Food Security Impact

- Increase un- or under-employment among population groups already un- or under-employed.
- Increase food prices when vulnerable households are net purchasers.
- Reduce food prices when vulnerable households are net sellers.
- Shift cultivation to cash crops when the shift decreases labor utilization.

# Positive Food Security Impact is More Likely When Promoting...

- Agricultural tasks normally performed by women.
- Small-scale processing.
- Food disproportionately consumed by food insecure households.





## Positive Nutrition Impacts are More Likely When...

- The promoted production (crops, animals) has high nutritional value and vulnerable households regularly consume.
- The intervention includes explicit nutrition counseling (and coupled with access to health care, sanitation and hygiene).
- The intervention includes home gardens.
- The project introduces micronutrient-rich crop varieties.



# Positive Nutrition Impacts are More Likely When...

- They are designed to benefit or protect more nutritionally vulnerable populations at project inception.



Photo: PATH

# Solutions

1. Include meaningful nutrition objectives in project design (with activities supporting them).
2. Protect nutritional considerations in the design of production/income projects.



Photo: QFP/Mario DiBari

# Introducing Meaningful Nutrition Objectives

- Many agricultural projects already include “nutrition” objectives...
- What are *meaningful* objectives?
  - What population groups are most vulnerable?
  - What population groups are already worst off?
  - What is likely to change for them?
  - What are the intermediate steps to improved nutritional status?

# Incorporating a Nutrition Objective

- State the objective.
- Specify a population already suffering from high malnutrition prevalence.
- Group should be likely to be affected by the agricultural intervention.
- SMART: specific, measurable, attainable, relevant and time-bound.
- Choose appropriate indicators (nutrition-related).



## Ensuring that Activities Support Objectives (Objectives Tool Guidance)

- Reduce stunting (chronic malnutrition)
  - Treating acute malnutrition will have little impact.
- Reduce wasting
  - May need sanitation, improved health care in order to show impact.



# Designing Interventions

- Include nutrition programming expertise on design team
- “Nutrition Program Design Assistant”

<http://www.coregroup.org/component/content/article/119>

# Avoiding Negative Impacts: the Nutritional Impact Assessment Tool

- Similar to environmental and gender impact assessments.
- Designed for agriculture program planners to consider nutrition impacts on vulnerable groups.

**Nutritional Impact Assessment Tool**

General nutritional TIAs are needed to assess the risks and benefits of agricultural projects that can impact on the nutritional status of vulnerable populations. This tool is designed to help you assess the risks and benefits of your project.

**1 Project objectives**  
Enter each of the project objectives in the space below.

**2 Population groups at risk**  
Indicate which at-risk groups in the table below and mark the comparison groups for the right-hand column.

At-risk group	Comparison group
A	
B	
C	
D	
E	

**3 Current status of population groups at-risk**  
Complete the table with existing data that documents the status of the at-risk and comparison groups. For rows 1-3, choose data that represents risk for children under 5 or children under 5 and women 15-49. Choose data that represents girls/women 15-49 years. Insert an X if data is not available for specific populations. Please refer to the Data and Reporting Manual for more information on entering data.

Group A	At-risk group	Comparison group
Indicator 1:		
Indicator 2:		
Indicator 3:		
Indicators 4-6 (if any)		
Indicator 4:		
Indicator 5:		
Indicator 6:		

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**IYCN** IYCN Center for Resilient Livelihoods

# How does it work?

<b>Step 1</b>	List Project Objectives
<b>Step 2</b>	Define population groups at risk.
<b>Step 3</b>	Describe nutrition situation for at-risk.
<b>Step 4</b>	Create approach alternatives.
<b>Step 5</b>	Estimate likely outcomes.
<b>Step 6</b>	Modify as needed for no negative impact..
<b>Step 7</b>	Assess and select alternatives.
<b>Step 8</b>	Design mitigation plan.
<b>Step 9</b>	Develop review plan.



# Step 5: Estimate Likely Outcomes

**Proposed approach**

<i>Food insecure population group A</i>		<i>Food insecure population group B</i>	
Children <input type="checkbox"/> <2 or <input type="checkbox"/> <5 (check one)		Children <input type="checkbox"/> <2 or <input type="checkbox"/> <5 (check one)	
Indicator 1		Indicator 1	
Indicator 2		Indicator 2	
Indicator 3		Indicator 3	
Overall impact estimate		Overall impact estimate	
<b>Girls/women 15–44 years</b>		<b>Girls/women 15–44 years</b>	
Indicator 4		Indicator 4	
Indicator 5		Indicator 5	
Indicator 6		Indicator 6	
Overall impact estimate		Overall impact estimate	

# Step 7: Assess alternative approaches

## STEP 7

### Assess alternative approaches

Rank all of the approaches based on nutritional impact estimates from Step 5.

Approach	Rank	
	Children	Girls/women
Proposed approach		
Alternative approach		
“Do nothing” approach		

Select the approach to be implemented and write it here.

If the selected approach is not the highest ranked both for children and for girls/women, provide a justification for selecting an approach that is not expected to produce the greatest nutritional benefits.

Thank you



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