



IYCN USAID's Infant
& Young Child
Nutrition Project

Review of experience

Agriculture, food security, and nutrition

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Photo: Aurelio Ayala III

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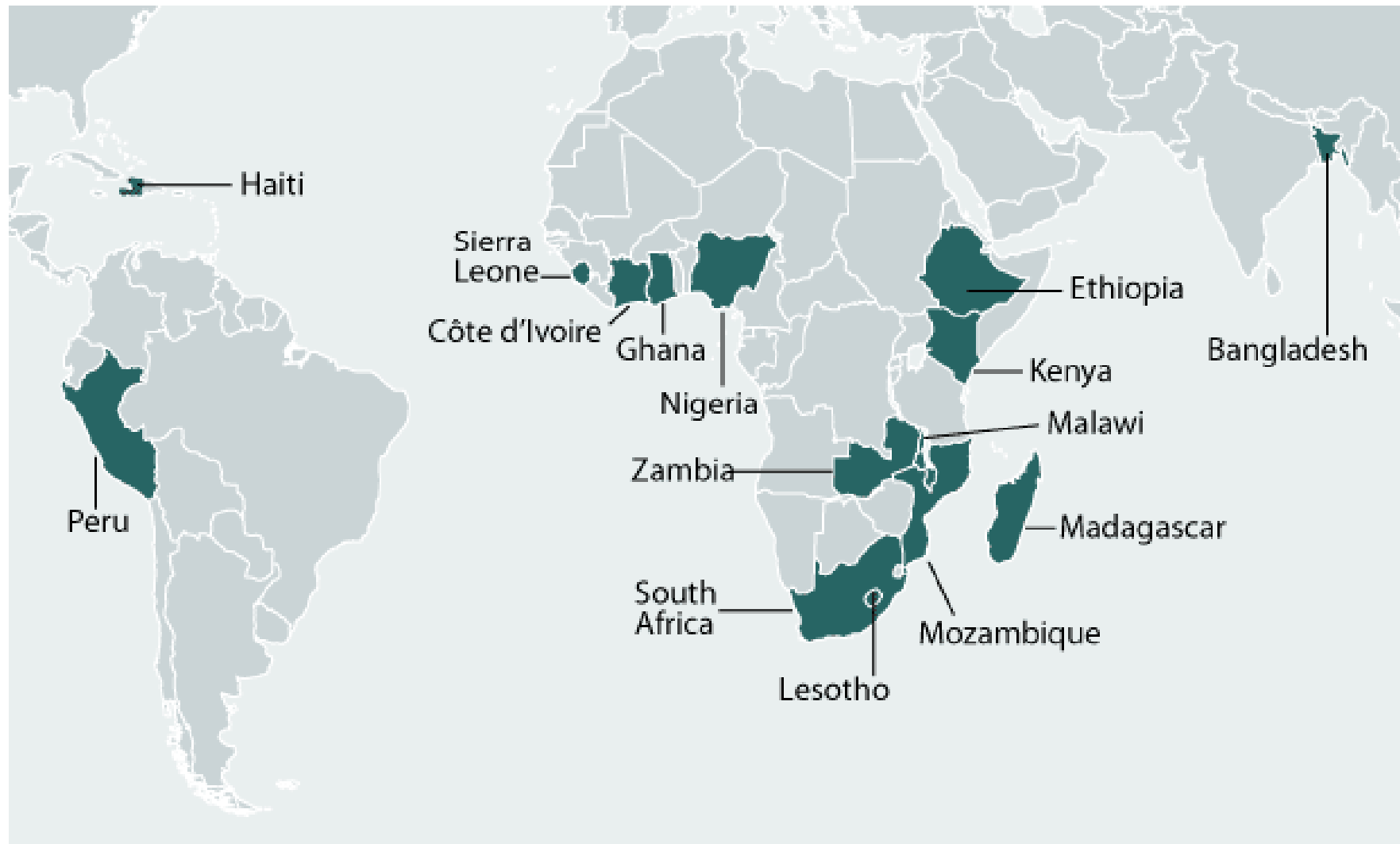
The Infant & Young Child Nutrition Project

- USAID's 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.



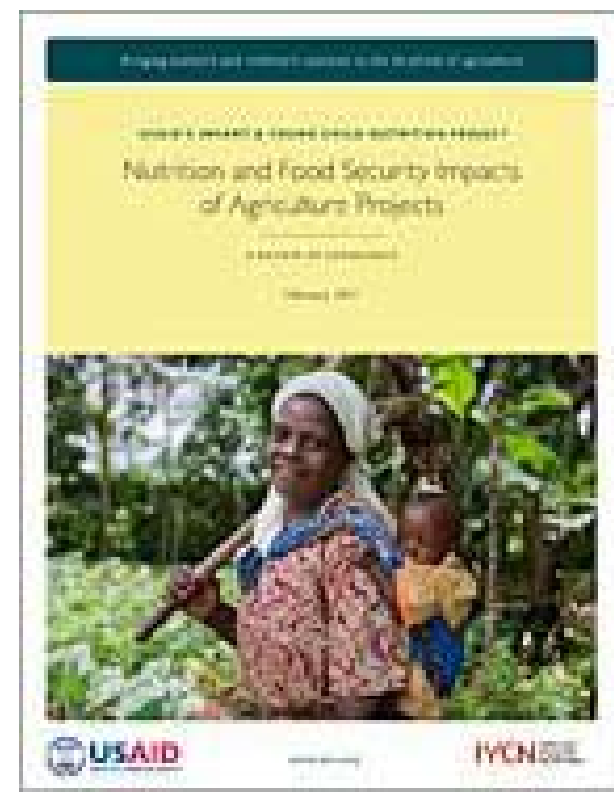
Photo: PATH/Evelyn Hockstein

Countries



Review of experience

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



Food security impacts



Photo: PATH/Evelyn Hockstein

Increasing farm income

- Small farmers often cannot participate in new technology.
- Failure to reach the poor (Uganda)
 - Small farms tend to have more unused labor per hectare.
 - Small farm production increase more often results in improved local food production.



Increasing farm employment

- Agricultural laboring (landed) households spend 60 to 80 percent of income on food.
- Productivity increases increase labor demand (Gambia).
- Increased mechanization can wash out demand by displacing labor (Bangladesh, Indonesia, Philippines).



Price support/subsidy in Cameroon

- Short-term impact of 10% food price increase.
 - 3% increase in farmer income.
 - 0.5% increase in food consumption from income.
 - **11.6% decrease** in food consumption from increased prices.
- Potential impact: higher prices stimulate production leading to greater income increase.

Net selling/purchasing status of target households is key

- **Honduras:** Price support for maize benefitted large-scale producers (net sellers) but harmful to small-scale (net purchasers).
- **Jamaica:** Higher price for sugar outweighed employment increase.
- **Egypt:** Price support for beef benefits small farms who are primary beef producers.

High value and export crops

- Key factor: land/labor situation
- If shift subsistence crop land to high value/export crop...
 - Food-insecure may be deprived of foods.
 - Prices of foods previously produced on these lands may increase.



Other intervention effects

- Intercropping with food crops disproportionately consumed by the poor.
- Small-scale processing increases employment .
- Labor required for preparation (Mali rice preference).
- Involving women likely improves translation of income increases to increased food security.



Relative difficulty of disseminating a technology

- **Difficult (fish cultivation):**
Limited initial impact but long-term gains.
- **Easy (vegetable cultivation):**
substantial initial impact short-lived as the number of competing producers increases.



Summary of food security impacts

- **Positive**

- Increase employment of under-/unemployed.
- Focus on tasks performed by women.
- Increase employment with small-scale processing.
- Increase production of “poor people’s foods”.

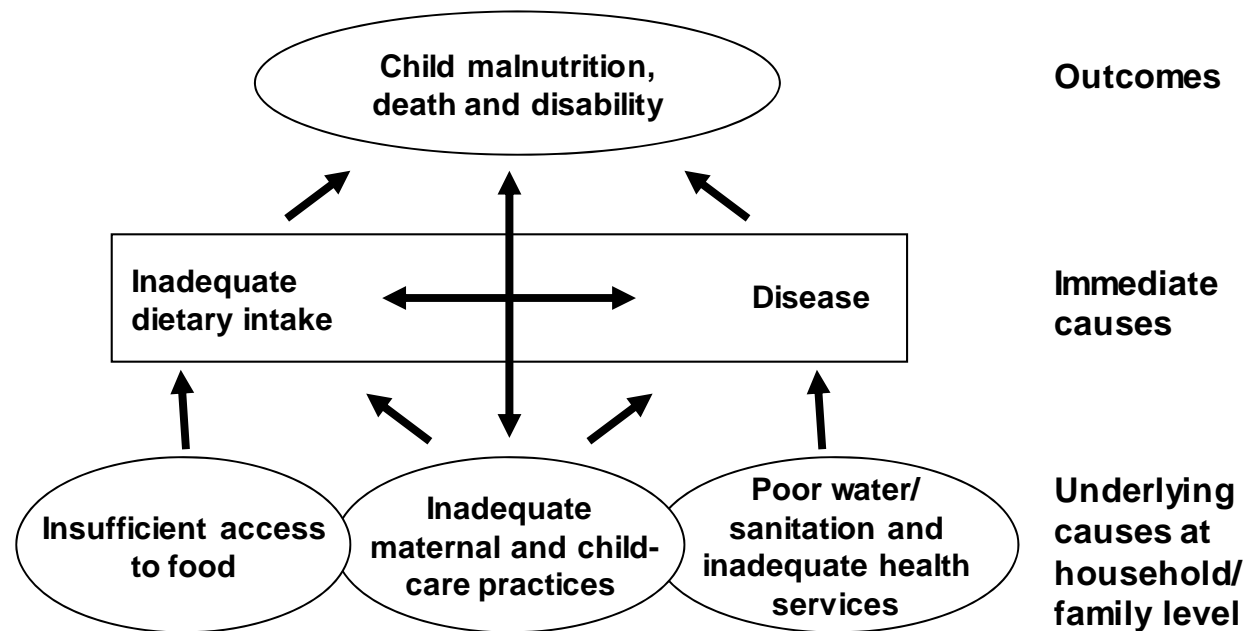
- **Negative**

- Large-scale mechanization

- **Mixed**

- Food price intervention (sellers vs. purchasers?)
- Cash crops (land/labor surplus?)

Nutrition impacts: reaching children



Source: The State of the World's Children 1998

Children's needs are special

- In Kenya, shifting production from maize to sugarcane...
 - Increased food intake by 360 kcal per household per day.
 - Sugarcane laborer wages 3 times higher than maize laborers.
 - No child nutritional status impact (caring practices and morbidity more important than food security and income).



Income alone is not enough: Rwanda

- Doubling household energy consumption would reduce child stunting by $\frac{1}{4}$ standard deviation, but...
 - Deworming alone achieves the same impact.
 - Clean latrine achieves twice the impact.



Philippines: Providing agricultural land

- Landless: Improved child nutritional status.
- Landed: No change in child nutrition.



Photo: Courtesy of the David and Lucile Packard Foundation

Improvement independent of income

- Households tend to consume some amount of their production (fish, dairy, poultry, vegetables).
- Child nutrition improved without income increase.
- High nutritional value foods.
- Nutrition counseling has an important role to maximize home consumption.



Positive impact of home gardens

- All of the evaluated projects included...
 - Nutritional objectives.
 - Nutritional counseling.
- Most included...
 - Gender considerations.
 - Public health interventions.



Potential of micronutrient-rich varieties

- In Mozambique, introduction of orange-flesh sweet potatoes.
 - Increased vitamin A intake.
 - Increased vitamin A status among children.
- New crops on the horizon.
 - Provitamin A-rich maize.
 - Iron-rich beans, pearl millet.
 - Zinc-rich rice, wheat.

Potential negative impacts

- **Agriculture employment:** Reduce women's time for child care
- **Animal production:** Increased risk of zoonosis and chronic disease.
- **Irrigation:** Increased mosquito populations and malaria.



Summary of nutrition impacts

- **Positive**

- Nutritional objective(s) in project design
- Nutritional counseling
- Gender considerations
- Public health interventions
- Micronutrient-rich varieties

- **Negative**

- Impact on women's time for child care
- Zoonosis
- Chronic disease
- Malaria (irrigation)

Thank you



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