



# Strategic Review

FEED THE FUTURE

February 28, 2011

This presentation represents the preliminary strategic direction of a multi-year, whole-of-government, U.S. strategy to address food security in a Feed the Future country or region. It describes partner country progress and outlines how U.S. investments will align in support of partner country priorities. This document has not yet been approved or funded but will form the basis of a multi-year strategy in development.



## Contents

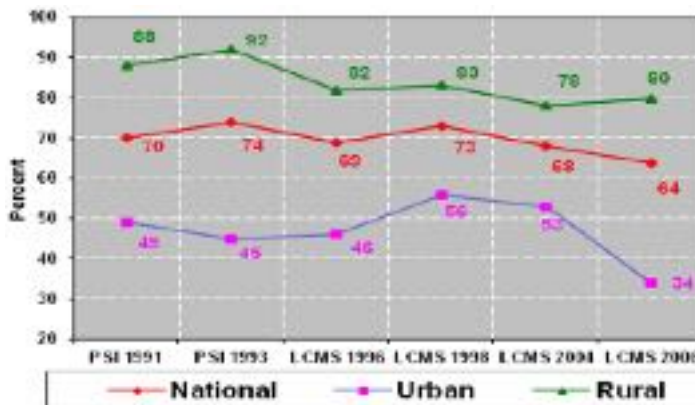
1. Problem statement
  2. Country readiness
  3. Identifying USG priority investments and partner alignment
  4. Proposed USG interventions
  5. Impact and timeline
  6. Next steps
-

# Hunger persists in Zambia, despite GDP growth...

For the past decade, Zambia has averaged 6% GDP growth;  
however ...

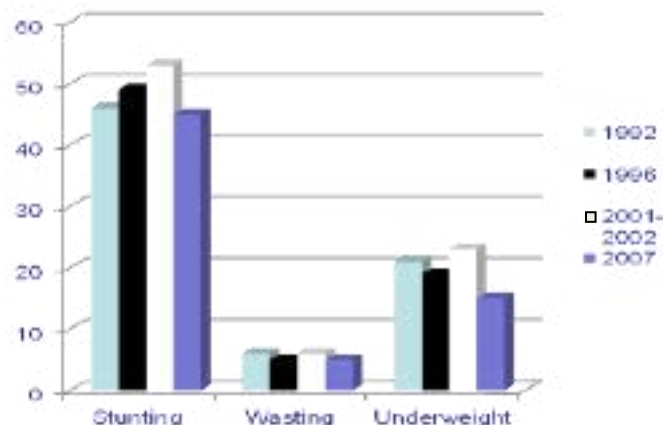
Rural poverty has not declined in a decade

- Rural poverty rate is 80%
- Income inequality among top 20 in world (0.526 Gini Coefficient)



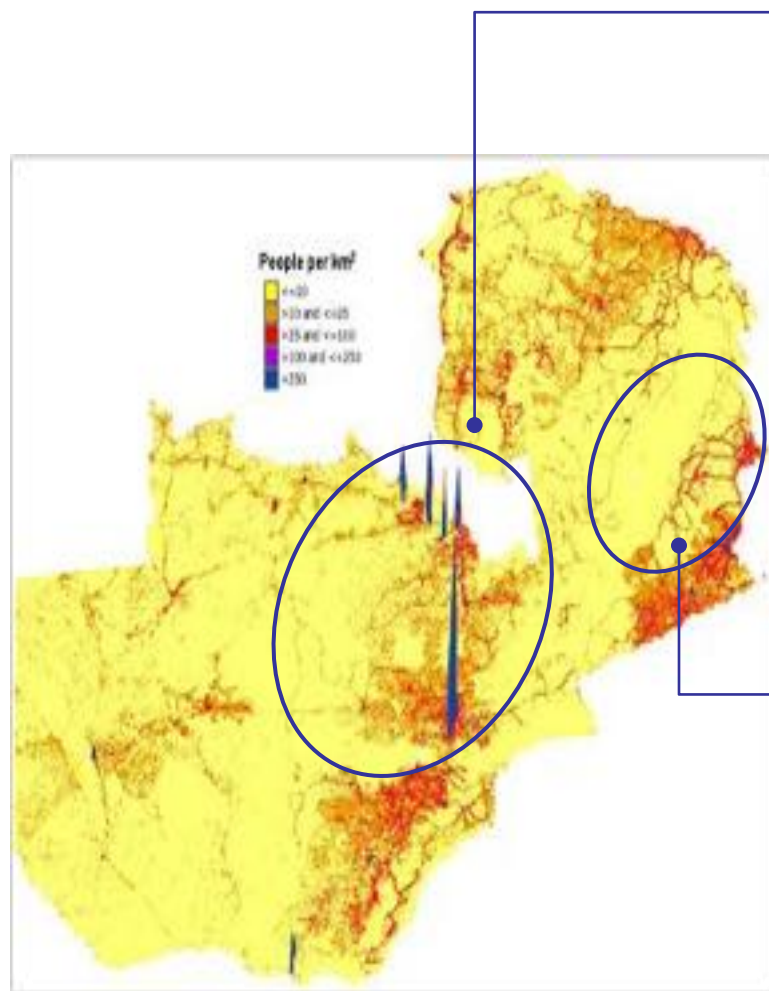
Undernutrition remains high

- High rates of undernutrition and child stunting persist (45%)
- High micronutrient deficiencies (50% of children Vitamin A deficient)





## ...as a result of Zambia's two divergent economies.



### Urban economy

- Middle income status
- Population concentrated along major transport corridors
- Reliance on extractive industry (copper) for foreign exchange earning (only 7% of paid employees)

### Rural economy

- High level of poverty (80%)
- Relatively dispersed
- Reliance on subsistence farming (95%)

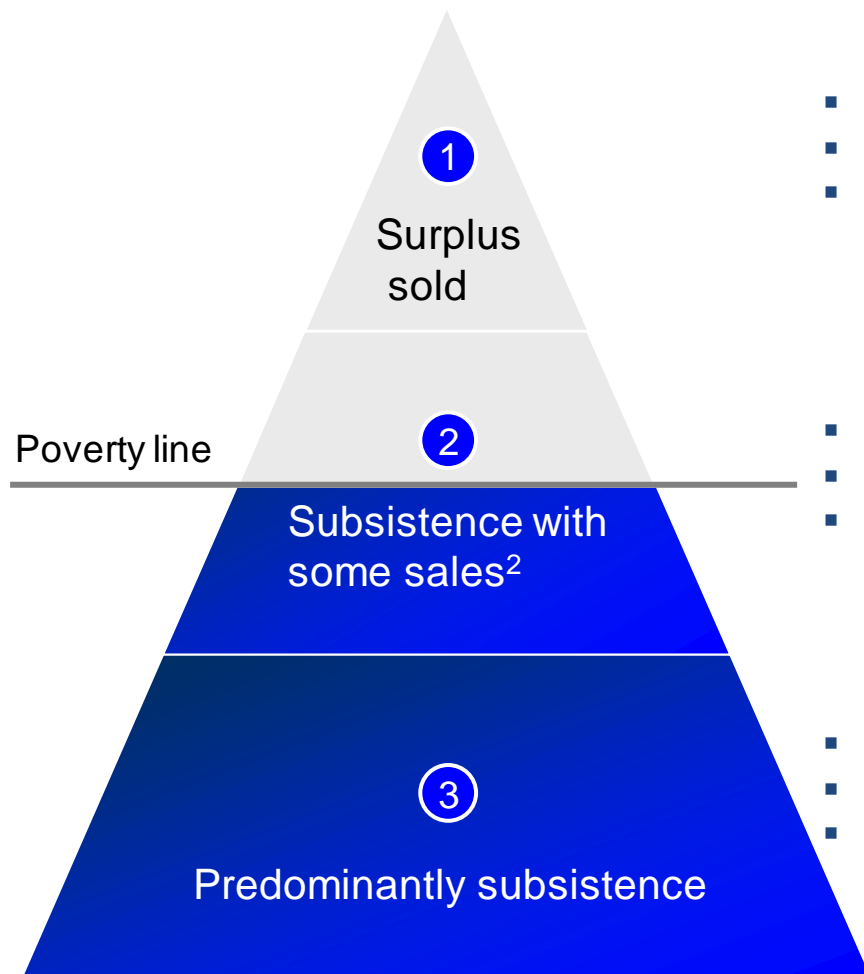
- High inequality
- 60% of population rural
- Smallholder agriculture growth is weak

# Most smallholders are poor and food-insecure.

## Smallholder Category<sup>1</sup>

## Characteristics

■ Potential to impact with FTF strategy



- 3% of smallholders
- US\$ 7,624 hh income
- 7.2 ha land

- 40% of smallholders
- US\$ 1,272 hh income
- 1.9 ha land

- 57% of smallholders
- US\$ 756 hh income
- 1.1 ha land

## The causes of persistent poverty and malnutrition are interlinked

- Low agricultural (labor) productivity
- Small farm size
- Reliance on maize
- Lack of infrastructure and technology deficits
- Limits to women's rights to control land, assets, and income

<sup>1</sup> Based on country wide sample of maize smallholders

<sup>2</sup> Not necessarily net sellers, may also be net buyers

# Zambia's government is committed to improving food security.

## Zambia is committed to agriculture investments...



- CAADP Compact signed January 18, 2011, committing to
  - Agriculture marketing and credit acts
  - Fertilizer distribution reform – first country to use e-vouchers
  - Increasing private sector role
- Leadership of critical African trade and agriculture institutions
  - African Growth and Opportunity Act (AGOA) forum chairmanship 2010-2011
  - Host of Common Market for Eastern and Southern Africa (COMESA) headquarters
- Sixth National Development Plan (2011-2015) Approved February 4, 2011
  - Target to increase contribution of agriculture from 16% to 20% of GDP by 2015
  - Commitment to agriculture marketing and credit acts as well as reform of the Farmer Input Support Programme
- National Nutrition Strategy being developed

...however, budget allocation is disproportionately weighted towards maize subsidies

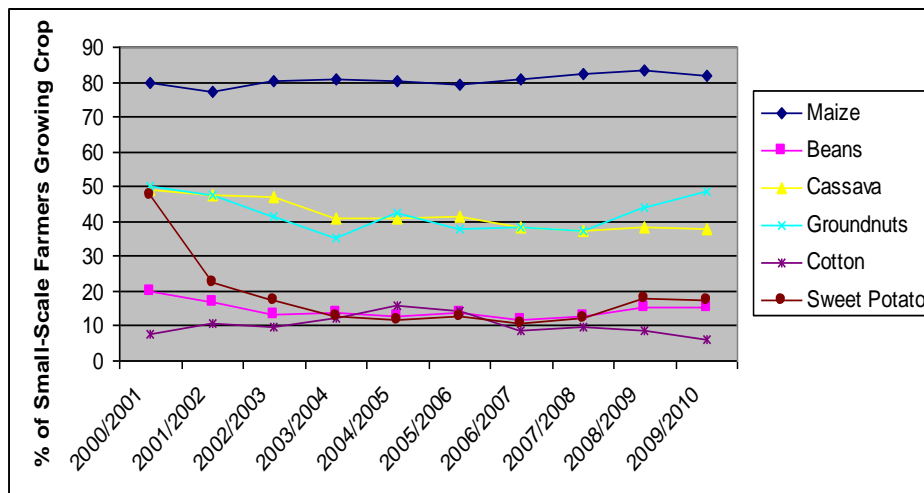
- >50% of agriculture budget
- Government of the Republic of Zambia (GRZ) purchases maize above market price
- Subsidized inputs

# Low maize yields lead to food insecurity.

## Maize dominates Zambian agriculture ...

- 82% of smallholders grow maize
- 50% of total cultivated land is under maize
- Most Zambians eat maize every day

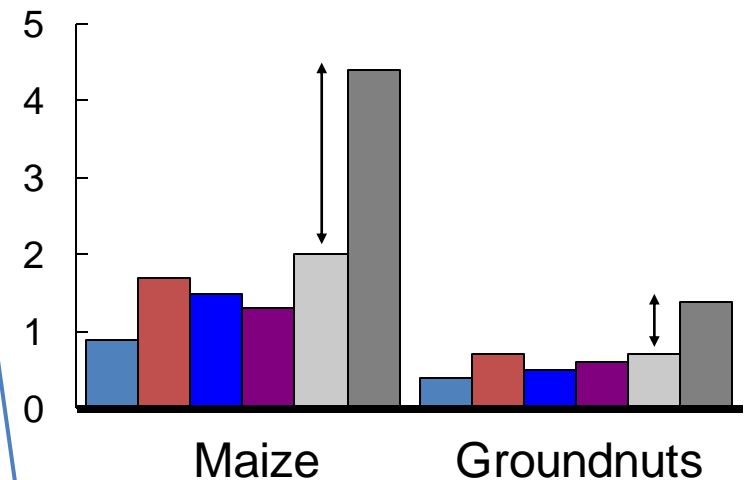
% of Small-scale Farmers Growing Crop



## ... however, productivity is low

- Yields are one-third the global average
- 3% of smallholder farmers sell over 50% of marketed production
- Most smallholders do not produce enough to meet household needs

Yield Average (MT/Ha): Zambia vs. Global



## Maize productivity enables smallholder commercialization.



Smallholders that produce high value commodities, including vegetables, devote a greater proportion of their land to maize than other crops, and have greater maize productivity

Smallholders devote labor, land, inputs to maize prior to other commodities

However, most smallholders are compelled to sell maize at harvest, and face several hungry months

Based on empirical analysis by IFPRI, increasing maize productivity is necessary but not sufficient for smallholder commercialization



# Feed the Future / Zambia will diversify staple crop production.

## *Diversification of selected staple value chains will ...*

... lead to increased smallholder productivity of all commodities, including maize



... increase income through higher value commodities and access to value-addition and export markets



... diversify diets and minimize risk of food scarcity

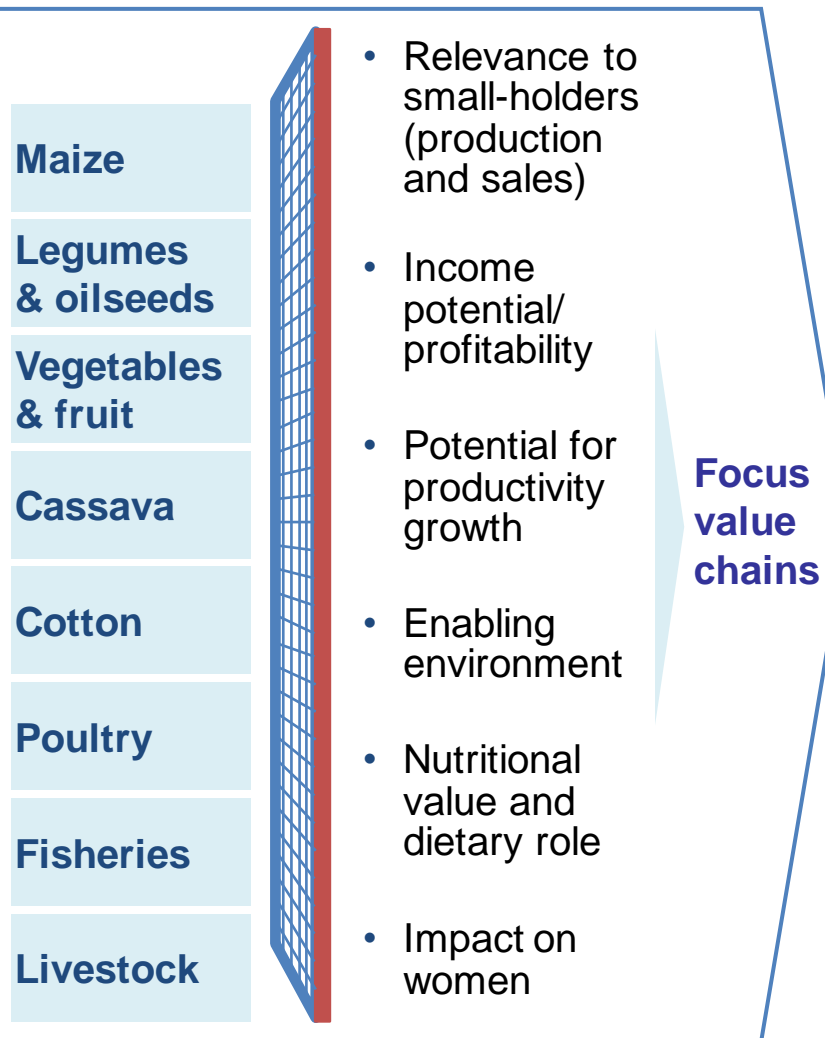


... contribute to a reduction in high rates of child undernutrition



# USAID/Zambia prioritized crops and geographies using key criteria.

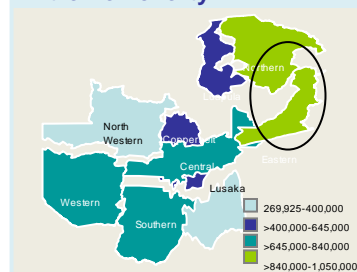
## Value chain selection criteria



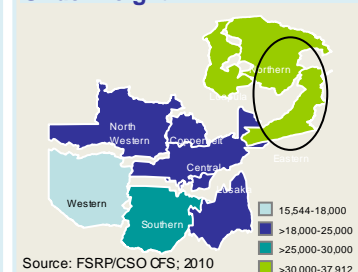
## Geographic selection criteria

- Significant smallholder population
- Number of people living in extreme poverty
- Number of underweight children
- Potential for agriculture diversification
- Transport links to key markets (commercial potential)

Number of People Living in Extreme Poverty



Number of Under 5 Children Underweight



Source: FSRP/CSO CFS; 2010

# Legumes, oilseeds, maize and vegetables emerged as strategic priorities.

● High potential    
 ● Medium potential    
 ● Low potential

SELECT CRITERIA

Value chain category	Number of smallholders producing	Potential for productivity growth	Nutritional value and dietary role	Impact on women
Maize	1,212,327	<span style="color: green;">●</span>	<span style="color: orange;">●</span>	<span style="color: green;">●</span> Female headed households have on average 0.5 hectares less than male
Legumes & oilseeds	720,688	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: green;">●</span> Women play a prominent role in production, marketing and trade
Vegetables and Fruit	1,230,242	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: green;">●</span> Low labor intensity makes this important crop for labor-constrained households
Cassava	562,249	<span style="color: green;">●</span>	<span style="color: orange;">●</span>	<span style="color: green;">●</span> Women play a prominent role in production and marketing
Cotton	94,278	<span style="color: orange;">●</span>	<span style="color: red;">●</span>	<span style="color: red;">●</span> Women play a smaller role in production
Poultry	988,658	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	<span style="color: orange;">●</span> 60% of producers and 50% of retailers are women
Fisheries	8,459	<span style="color: green;">●</span>	<span style="color: green;">●</span>	<span style="color: red;">●</span> Largely male-dominated production - women do not play a large role

# Two linked geographies showed high potential for impact.

## Legumes and oilseeds



- Integrated system with maize
- High nutritional value
- Potential for value addition & trade
- Women prominent in value chains

## Maize

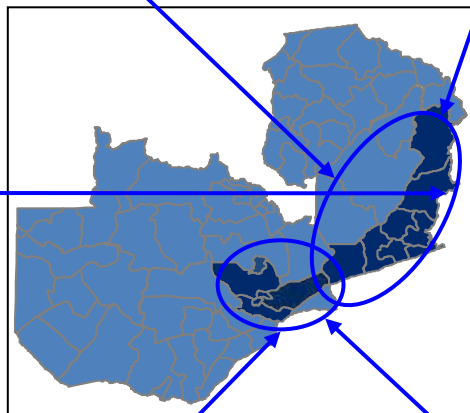


- Maize productivity essential for diversification and household food security
- High productivity potential
- Orange maize (high nutritional value)

## Horticulture



- High income potential for land-constrained peri-urban smallholders – particularly women
- High (urban) demand
- Significant contribution to dietary diversity



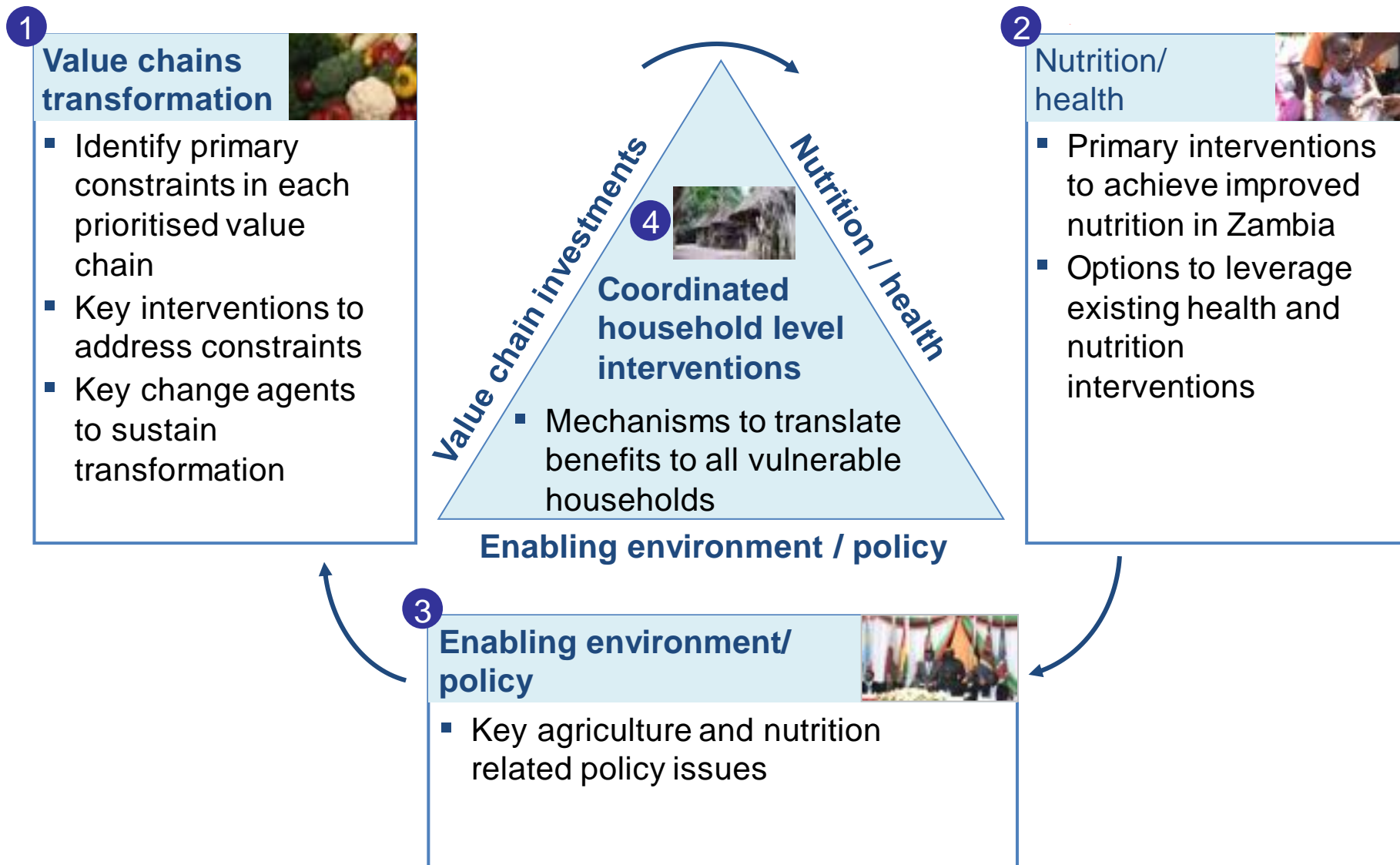
### Eastern province

- 240,000 poor smallholder farmers (1.4M people)
- 14% of underweight children under 5 in Zambia (39,700 children)
- 23% households are single female headed
- Transport corridor Lusaka-Lilongwe-Nacala
- Diversified agriculture base

### Selected peri-urban districts (Lusaka/Central)

- 40,500 small-scale producers have significant income potential
- Value-added processing centers (tomato paste) through out-grower schemes
- Lusaka/Eastern marketing link robust for legumes/bulk commodities
- Lusaka/Eastern horticulture linkages can be scaled up over time





# Programs will focus on key interventions and change agents in each value chain.

Different constraints are addressed in each of the value chains ...

✓ Addressed by FTF

... and priority interventions have been identified

Primary constraint

Policy

R & D

Inputs

Extension

Processing and trade

Consumption

**Oilseeds and legumes**

**Maize**

**Horticulture**

✓ Maize subsidies

✓ Research and adoption of improved maize varieties

✓ Poor extension services and new system proposed

✓ Insufficient value addition

✓ Lack of varied, balanced diet

✓ Lack of access to processing/little value addition

**Oilseeds and legumes**

**Maize**

**Horticulture**

▪ Input into public debate

▪ Orange and drought tolerant maize research

▪ Extension services

▪ Value addition and processing

▪ Promotion of enhanced nutrition and balance diet

▪ Value addition and processing

**Change agents**

**Oilseeds and legumes**

- Extension agents/private sector stockists
- Processors/ Aggregators (Farmer-based organizations and women's groups)
- Community health workers

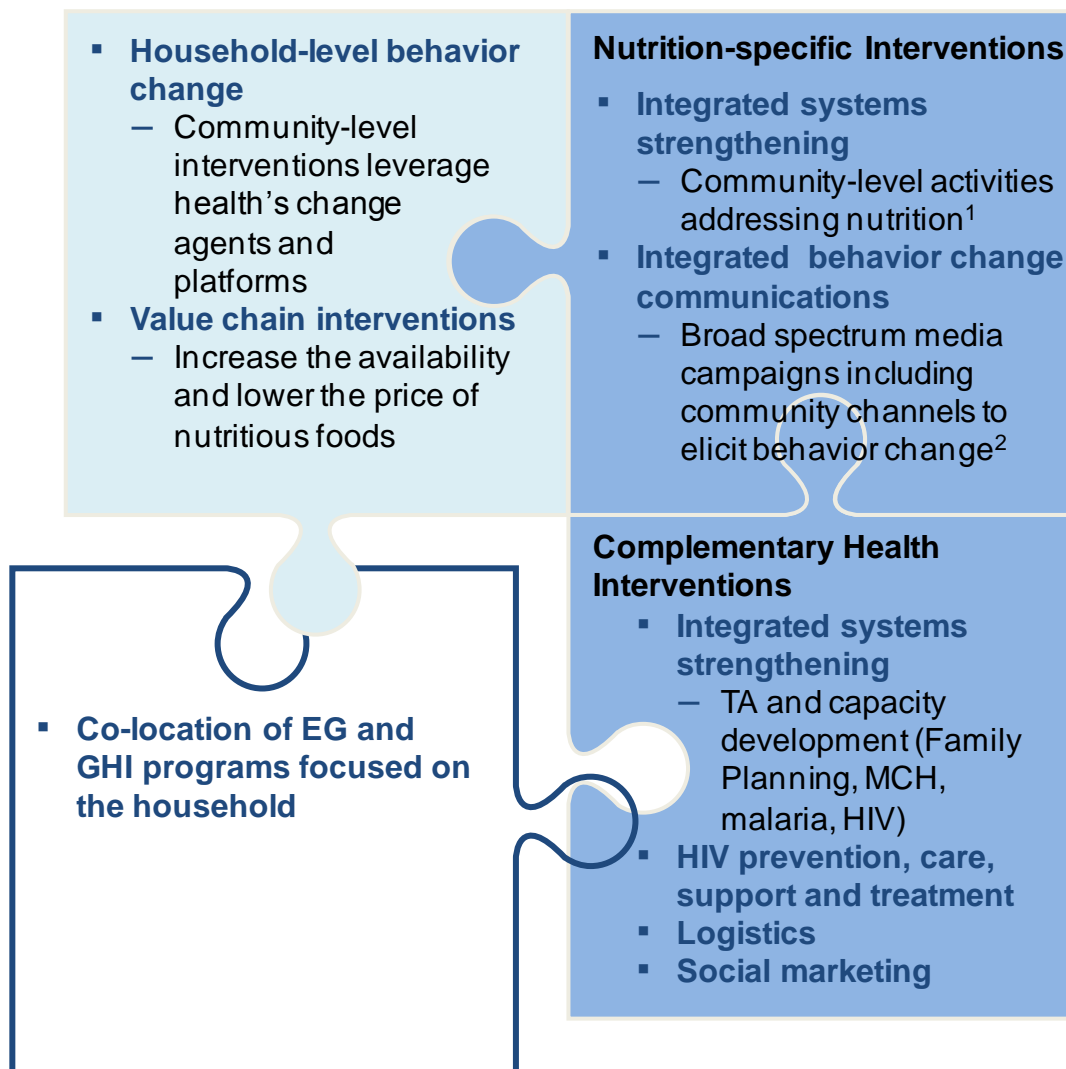
**Maize**

- Industry lobbying/advocacy groups
- Research centers

**Horticulture**

- Processors/ Aggregators

# Economic Growth and Health offices will co-locate nutrition interventions.



- EG FTF programs
- Health Programs including FTF

## Policy agenda

### Productivity

- Reform Farmer Input Support Programme to improve transparency and role of private sector
- Promote dialogue and build capacity to support reform on biotechnology



### Competitiveness

- Encourage predictable, rules-based market and trade policies (including elimination of import and export bans)
- Work with COMESA to harmonize regional trade policy
- Support alternatives to large-scale maize purchases by Food Reserve Agency (FRA), such as the Zambian Commodity Exchange (ZAMACE )



### Resource commitment

- Encourage allocation of budget commitments under CAADP to support infrastructure and R&D, and to reduce government intervention



### Sustainable land use

- Promote reform that enables natural resource benefit sharing between local government and local communities





# An economic resilience program will target vulnerable households.

## Proposed interventions are necessary but not sufficient

- There is **set of complex issues** that are not resolved through the proposed interventions:
  - Sustained growth has had **little impact on stunting** levels
  - Considerable **gender-based violence** over resource allocation
  - Significant section of population cannot **access markets**
- USAID/Zambia needs **greater clarity** on household-level constraints to effectively address them

## Innovative economic resilience measures to enable household-level impact



- Develop an **innovative economic resilience approach** to bring Feed the Future benefits to the household level:
  - Generate proposals on innovative household **models**
  - Scale up successful approaches (positive deviance model) which have had 75% reduction in malnourished children < 5
  - **Implement, monitor and scale-up successful programs**
  - **Assess impact** of program components (agriculture, health and nutrition) in comparison to co-located interventions
- Through this USAID/Zambia will extend its **learning agenda** to the household level

# Investments in nutrition, resilience and policy support stronger value chains.

Program (indicative level of effort)	Description
<div data-bbox="50 272 423 839"> <p><b>Diversification of production and income – Upgrade value chains (67%)</b></p> </div> <div data-bbox="430 272 751 839"> <p><b>a Oilseeds and legumes (38%)</b></p> <p><b>b Maize (10%)</b></p> <p><b>c Vegetables (19%)</b></p> </div>	<ul style="list-style-type: none"> <li>Promote access to seeds and inputs through private stockists and GRZ extension system (some Conservation Agriculture)</li> <li>Support leading processors to aggregate, warehouse, and source from smallholder suppliers</li> <li>Invest in orange maize research with ZARI and GART</li> <li>Promote access to seeds and inputs through private stockists</li> <li>Field test drought-tolerant maize</li> <li>Support out-grower schemes, linking smallholders to processors (value addition activities)</li> <li>Promote access to improved irrigation and other technologies.</li> <li>Support traders to scale-up (e.g., business skills, finance, market information and infrastructure)</li> </ul>
<p><b>Enabling environment and policy (6%)</b></p>	<ul style="list-style-type: none"> <li>Agriculture policy research and advocacy for reform</li> <li>Support to CAADP process</li> </ul>
<p><b>Economic resilience (11%)</b></p>	<ul style="list-style-type: none"> <li>Integrated approach to building assets and risk reduction</li> <li>Positive deviance change models that improve utilization</li> <li>Link to value chains</li> </ul>
<p><b>Nutrition (16%)</b></p>	<ul style="list-style-type: none"> <li>Capacity building and training of health workers</li> <li>Integrated behavior change communication</li> <li>Link with rural health services and nutrition interventions</li> </ul>

# Zambia's Feed the Future programs will promote innovation...

## Proposed program

## Innovation components

## Indicative Outcomes

### Oilseeds and legumes

- Agent model for increasing input access through private stockists based on successful USAID/Zambia model
- Aflatoxin testing and prevention

### Maize

- Biofortification of orange maize (Vitamin A) through government led research and extension systems
- Drought-tolerant maize

### Vegetables

- Price information systems through mobile phones

### Enabling environment

- Expanding mobile banking options (payments, electronic vouchers & money transfers), e.g., e-vouchers for fertilizer distribution
- Support to Agriculture Consultative Forum (ACF) to promote public debate on agricultural policy

### Economics resilience and nutrition

- Innovative proposals designed to test and scale up household-level change agent models, such as positive deviance for improved nutrition

- Increase in number of commissioned community-based extension workers
- Orange maize campaign; annual increase in production/sales/adoption
- Prices available through mobile services
- Proportion of inputs supplied to farmers by private sector increased



# ...increase women's incomes and food security....

## Proposed program

### Gender impact

### Indicative Outcomes

#### Oilseeds and legumes

- Ensure women are not displaced from value chains (groundnuts)
- Improved varieties to reflect women's preferences (groundnuts)
- Support women's groups in production and processing enterprises

#### Maize

- Reduce high labor demand for weeding through access to mechanization and inputs
- Ensure research takes into account women's needs

#### Vegetables

- Ensure equal trading opportunities and improved market infrastructure for women

#### Enabling environment

- Evaluate women's land rights in Eastern province
- Explore options to mitigate gender-based violence related to income and asset control

#### Economic resilience and nutrition

- Promote changes in household behavior for more equitable intra-household distribution of labor burden, food and assets
- Support behavior change to support maternal and infant feeding

- **Technologies tested for relative gender impacts**
- **Increased numbers of women in horticulture production and marketing**
- **Models tested for reducing gender-based violence in post-harvest periods**
- **Models tested for improving intrahousehold allocation of labor and commodities**





## Proposed program

### Sustainability impact

### Indicative Outcomes

**Oilseeds and legumes**

- Promote Conservation Agriculture, in order to improve soil fertility, increase productivity and reduce deforestation

**Maize**

- Develop adaptive crop varieties for increased productivity under changing climatic conditions (drought tolerance)

**Horticulture**

- Promote efficient water use

**Enabling environment**

- Support Zambian policy research capacity and advocacy



























**Economic resilience and nutrition**

- Ensure community (shared) benefits from natural resource use, including land rights/access, particularly by women, and promote reduction of deforestation

- Increased adoption of conservation agricultural methods
- Drought-resistant maize varieties available and utilized
- Improved irrigation technologies applied by horticulture growers (partnership with World Bank)
- Zambian institutions promote policy reform



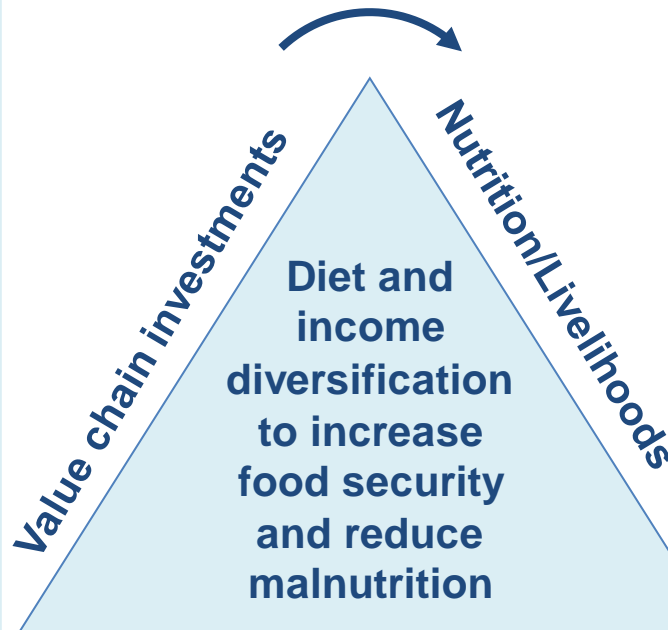
# By leveraging partners' investments, FTF/Zambia will maximize impact.

Proposed program areas	Key donor investments	Who?	Potential partner?
Oilseeds and legumes	<ul style="list-style-type: none"> <li>Conservation Agriculture promotion</li> <li>ZAMACE procurement and storage</li> <li>Drought tolerant maize/tropical legumes</li> </ul>	 	✓
Maize		  	
Horticulture	<ul style="list-style-type: none"> <li>Peri-urban smallholder irrigation</li> <li>Market infrastructure upgrade</li> </ul>	 / 	✓
		  / 	✓
Enabling environment	<ul style="list-style-type: none"> <li>Agriculture policy support and advocacy</li> <li>Capacity building in Ministry of Agriculture and Co-operatives (MACO)</li> <li>Feeder roads in Eastern province</li> <li>Smallholder financial services</li> </ul>		✓
		  /   /  	✓
Economic resilience and nutrition	<ul style="list-style-type: none"> <li>Food vouchers and/or school feeding</li> <li>Scaling Up Nutrition (SUN)</li> <li>Poverty reduction and social safety nets</li> </ul>	 	✓
		      	

## Whole-of-Government (WOG) Interventions in Agriculture



- Investment promotion
- SPS regulations; aflatoxin reduction
- Aflasave technology (IITA, BMGF, USDA)
- PC Volunteers in agriculture (food security)



## WOG Interventions in Health

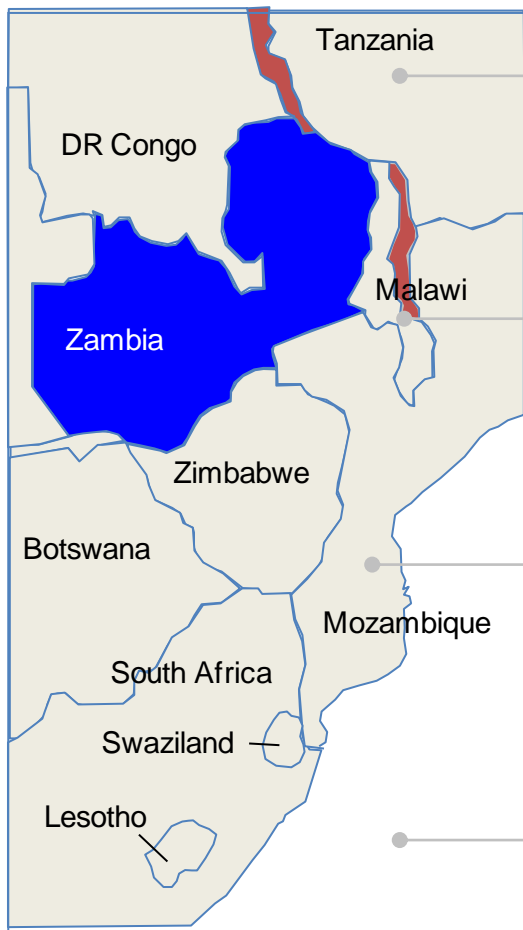


- Volunteers in health, HIV/AIDS cross cutting
- HIV/AIDS and health systems strengthening
- PEPFAR HIV/AIDS: Coordination across HIV/AIDS interventions
- HIV/AIDS prevention, care, support on military bases

## WOG Interventions



- Policy dialogue
- Future linkage to Kafue Game Management Area



## Coordination opportunities

### USAID East Africa

- Support efforts with **Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA)** and **COMESA**, (grain standards harmonization and trade policy)

### USAID Malawi

- Look for joint trade linkage opportunities, (legumes/oilseeds)
- Coordinate investments in **aflatoxin research** and management

### USAID Mozambique

- Identifying opportunities for trade linkages through the **Nacala Corridor**
- Coordinate drought-resistant maize research

### USAID Southern Africa

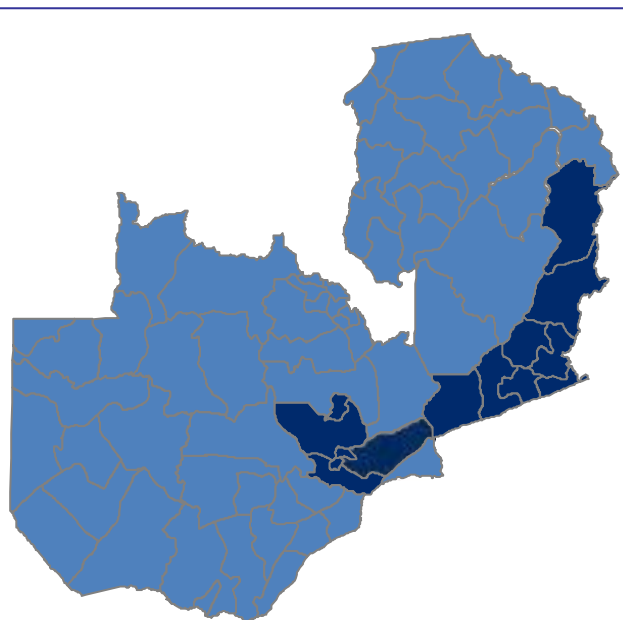
- Support efforts with **COMESA** trade standards harmonization, regional commodity exchanges, trade policy)
- Ensure **new trade hub** focuses on commodities and trade issues identified

## Regional export opportunities

- Exports to **East Africa** and beyond, via **Dar es Salaam** port
- Exports along **Nacala Corridor** via Malawi to Mozambique's deepwater ports
- Leverages new **dry port**, and Mozambique's focus on the **Beira and Nacala Corridors**
- Exports through **Southern Africa** to **Durban**, Zambia's main import/export trade route



# FTF/Zambia will significantly reduce poverty and undernutrition by 2015.



## Total population 2010: 3M

- Eastern (all): 1.7M
- Lusaka/central (selected districts): 1.3M

## Total population 2015: 3.5M

- Eastern (all): 2.0M
- Lusaka/central (selected districts): 1.5M

From 2010 ...

To 2015 ...

<b>Poverty</b>	<ul style="list-style-type: none"> <li>▪ Today, 2.3m out of 3m people live in poverty</li> <li>— 79% prevalence in 2010</li> </ul>	<ul style="list-style-type: none"> <li>▪ By 2015, reduced from 2.7m to 2.4m out of 3.5m predicted population in 2015</li> <li>▪ 70% prevalence in 2015</li> <li>▪ 340,000 people lifted out poverty</li> </ul>
<b>Nutrition</b>	<ul style="list-style-type: none"> <li>▪ Today, there are 70,400 underweight children &lt;5</li> </ul>	<ul style="list-style-type: none"> <li>▪ By 2015, number of underweight children &lt;5 will be reduced to 72,300 from a projected 81,800</li> <li>▪ 9,500 &lt;5s or 11.6% lower than predicted</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>▪ <b>&gt;50% MACO budget in subsidies</b></li> <li>▪ <b>GRZ delivers fertilizer</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Proportion of fertilizer by private sector increased to 80%</li> </ul>

# USAID/Zambia is developing a detailed M&E plan to monitor progress.

## Other indicators (5 years)

### Diversification of production and income – Upgrade value chains

- Gross margin per unit of land or animal of selected product
- Number of female-headed households removed from poverty
- Percentage income increase of female-headed households through value chain interventions

### Enabling environment and cross cutting activities

- Number of farmers, processors, and others who have adopted new technologies or management practices as a result of USG assistance
- Value of incremental sales (collected at farm/firm level) attributed to Feed the Future implementation
- Value of new private sector investment in the agriculture sector or food chain leveraged by Feed the Future implementation (Change in value – investments local and international)

### Economic resilience

- Change in average score on Household Hunger Index
- Number of women with effective control of productive assets

### Nutrition

- Percent of children 6-23 months that received a Minimum Acceptable Diet



## Immediate next steps

1. Incorporate strategic review feedback
2. Develop and submit detailed multi-year strategy
3. Finalize procurements
4. Begin implementation