

# Roundtable on Resilience and Market Systems

**Moderator:**

Gregory Collins, *USAID*

**Panelists:**

Tanya Boudreau, *Food Economy Group  
(FEG)*

Gabriela Alcaraz, *Chemonics International*

Ryan Vroegindewey, *USAID*



FEG

THE FOOD ECONOMY GROUP

# Building Resilient Livelihoods with Targeted Market Support

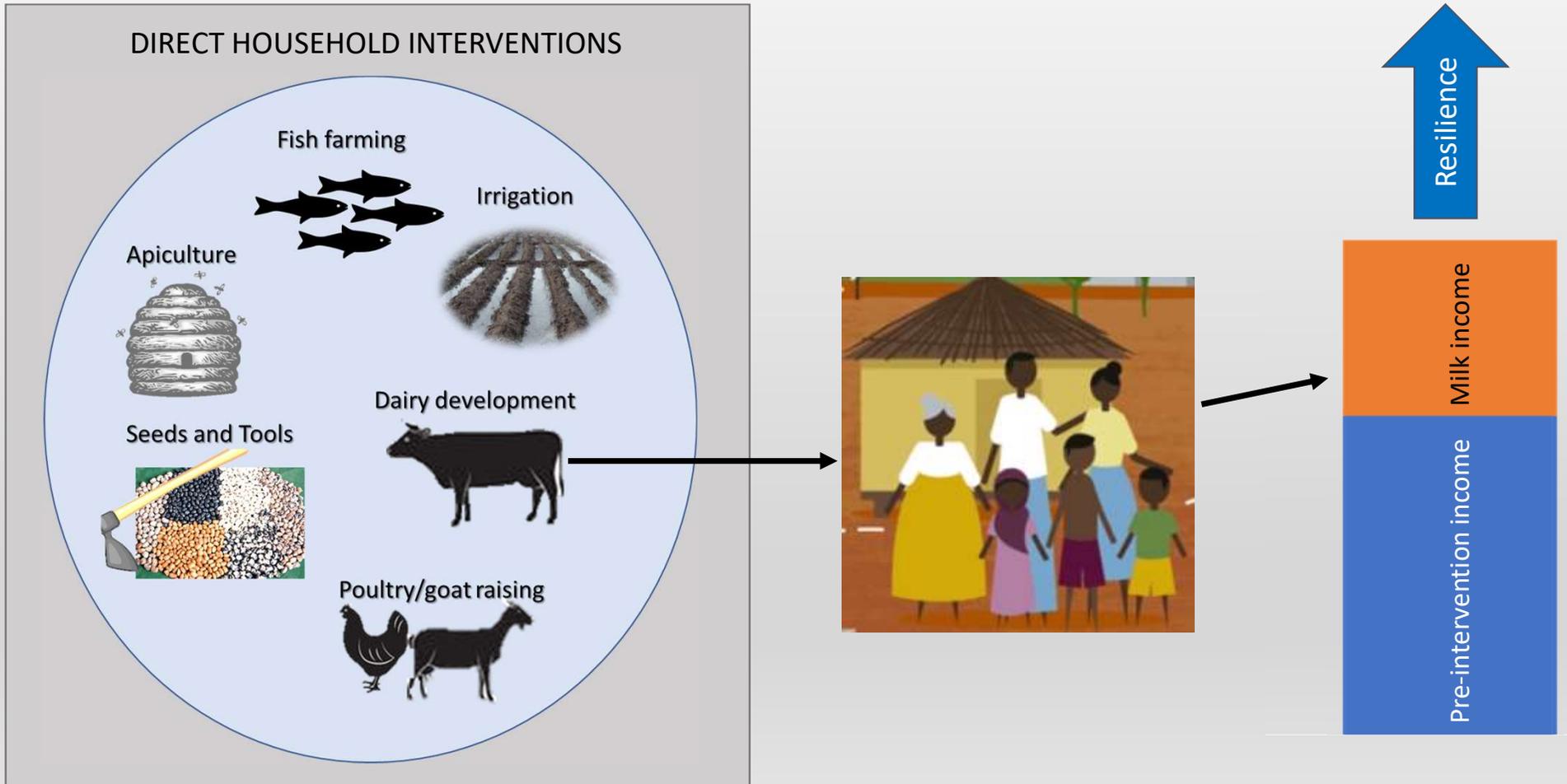
Evidence from Malawi, Tanzania, Ethiopia, and Kenya

*Tanya Boudreau FEG*

## MAIN POINT

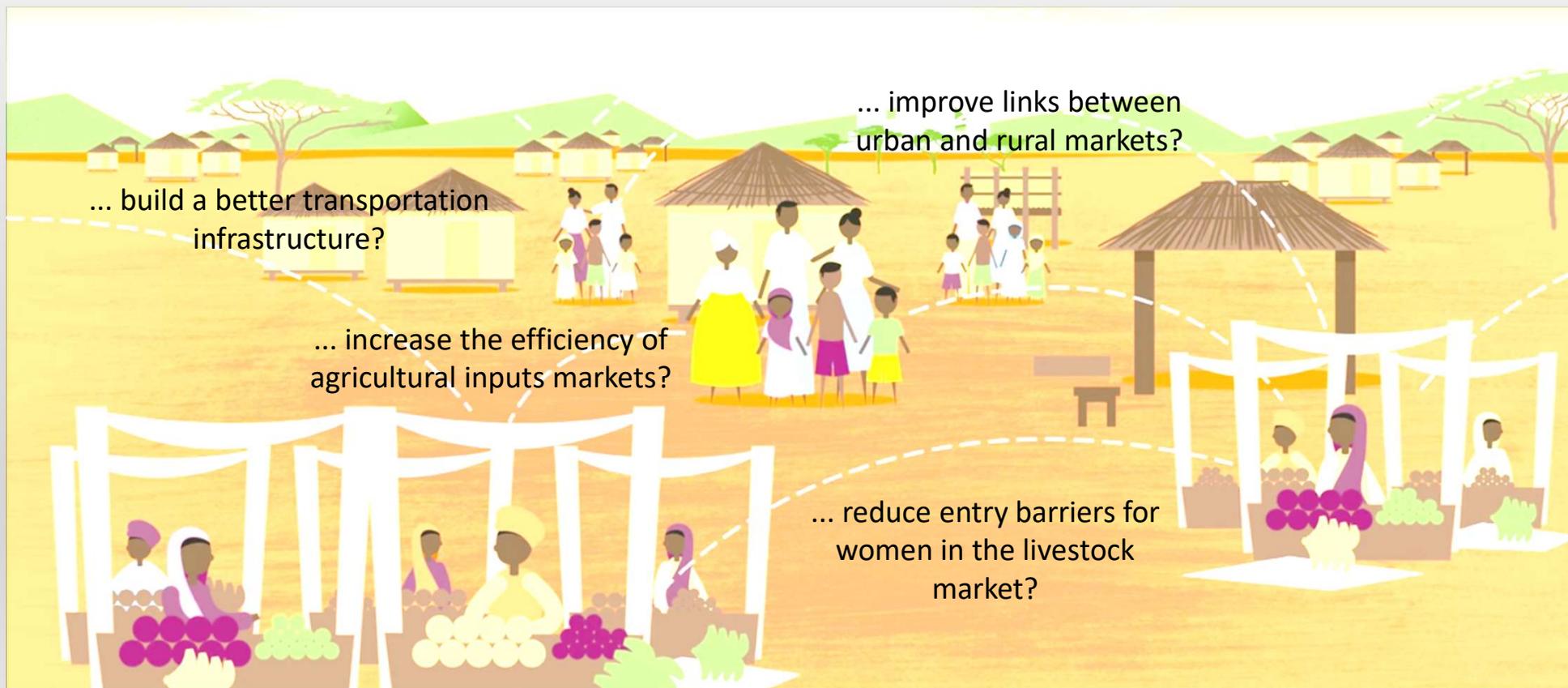
As long as the pathways between households and the market systems they rely on are clearly mapped out, we can employ market-systems level interventions, rather than direct household level interventions, to increase household resilience.

# Household Interventions vs Market-Led Approaches



# Household Interventions vs Market-Led Approaches

What happens at the household level if we ....

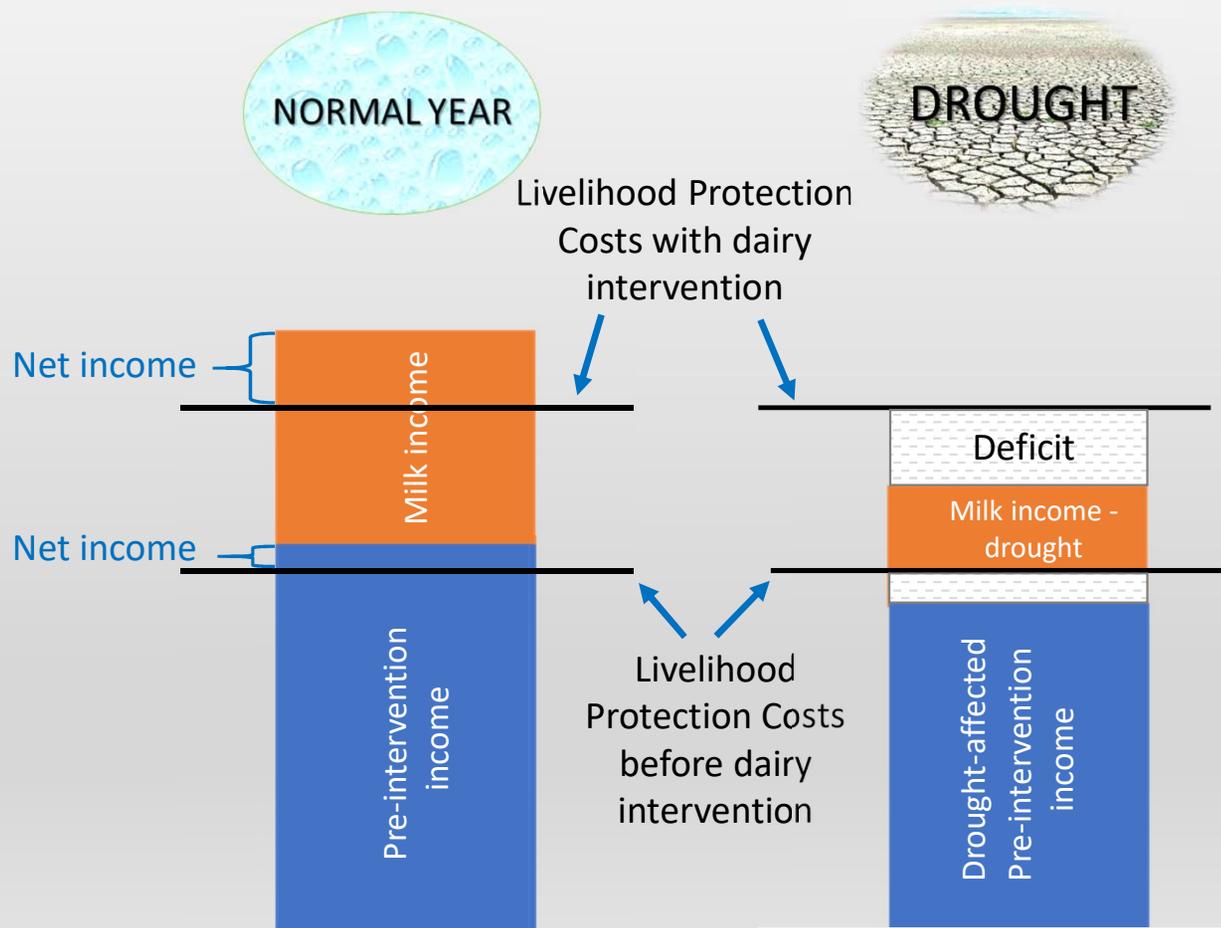


# A Brief Word on Resilience

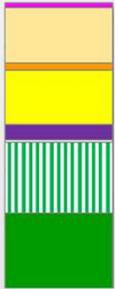
Not just about increasing absolute income...

...It's about increasing net income in a hazard year.

Dairy development



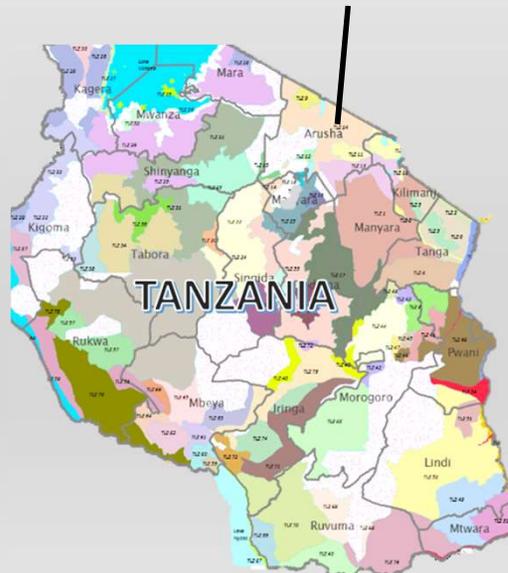
# A Market-Led Approach to Resilient Livelihoods



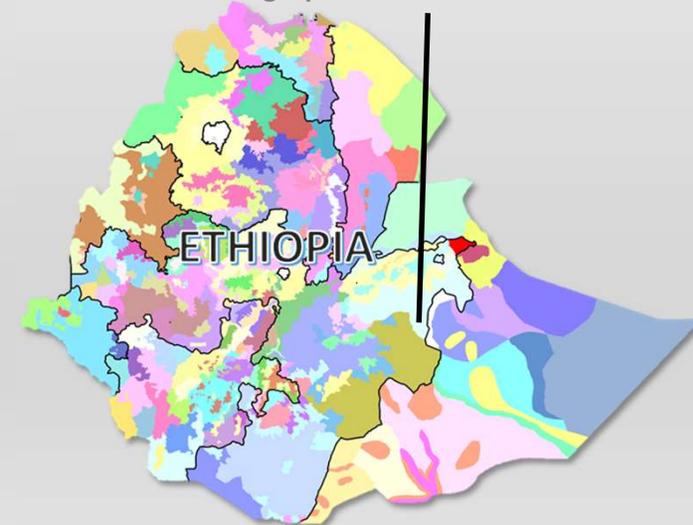
Northern Karonga Livelihood Zone



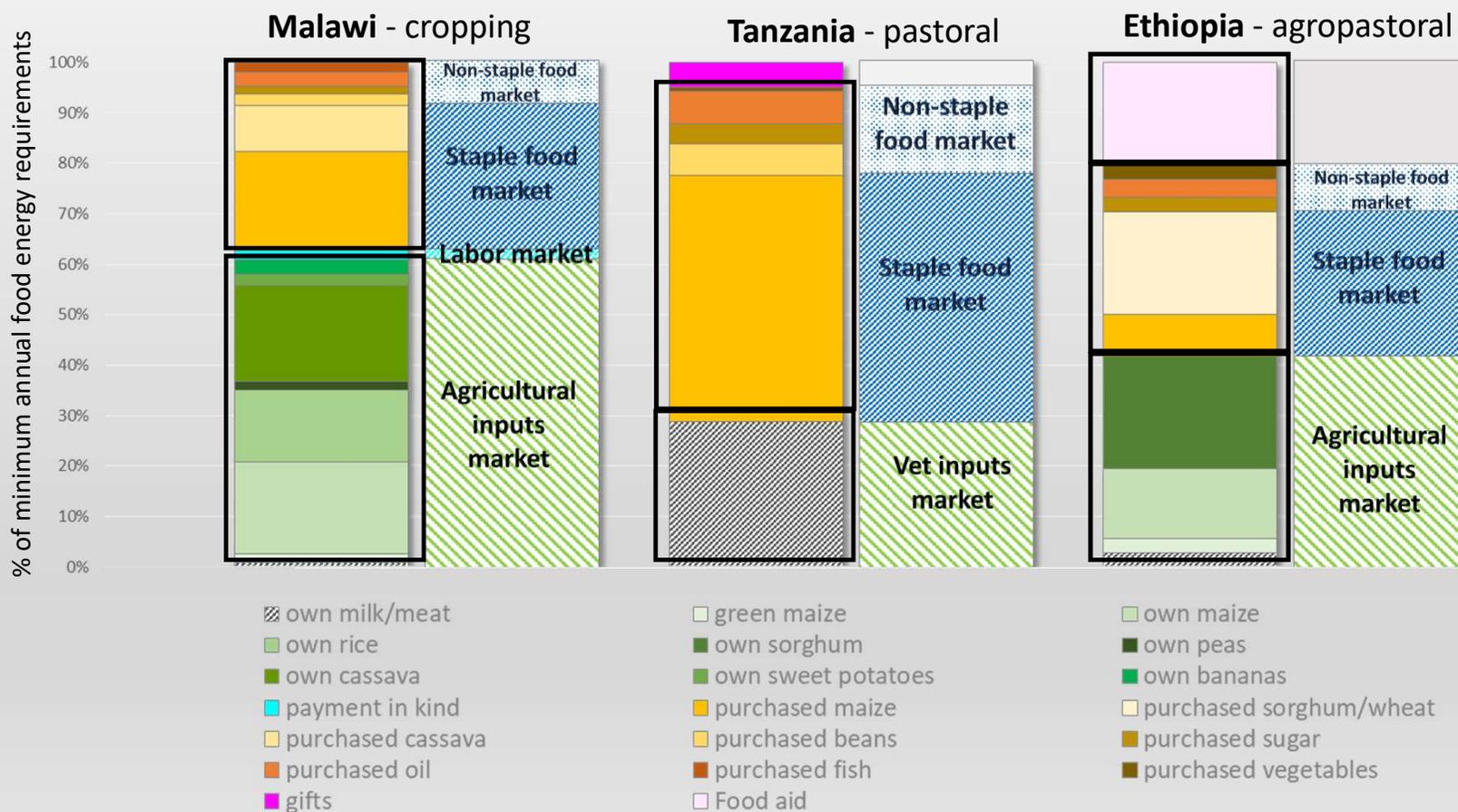
Northern Maasai Pastoral Livelihood Zone



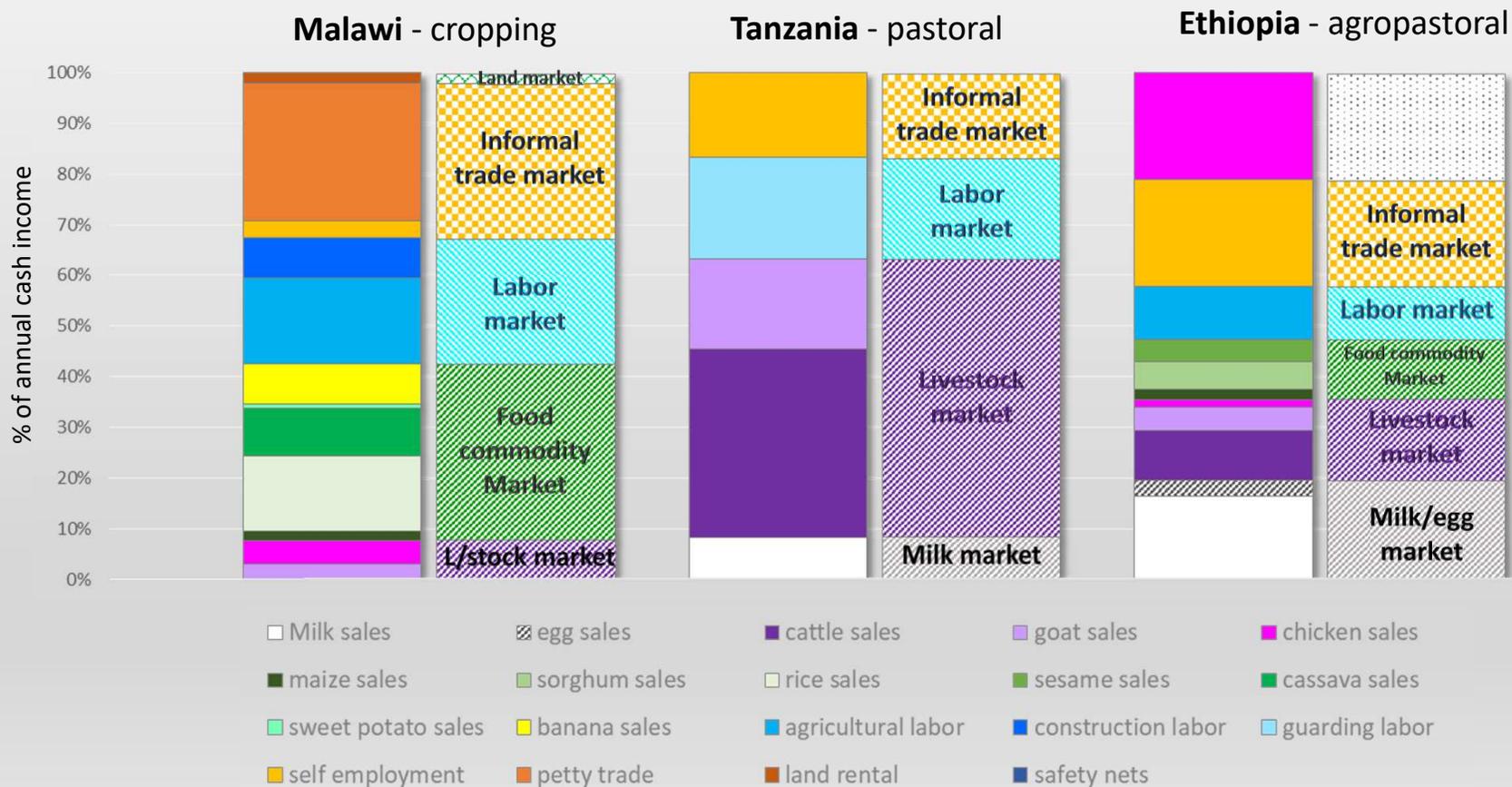
Oromia - Northeastern Agropastoral Livelihood Zone



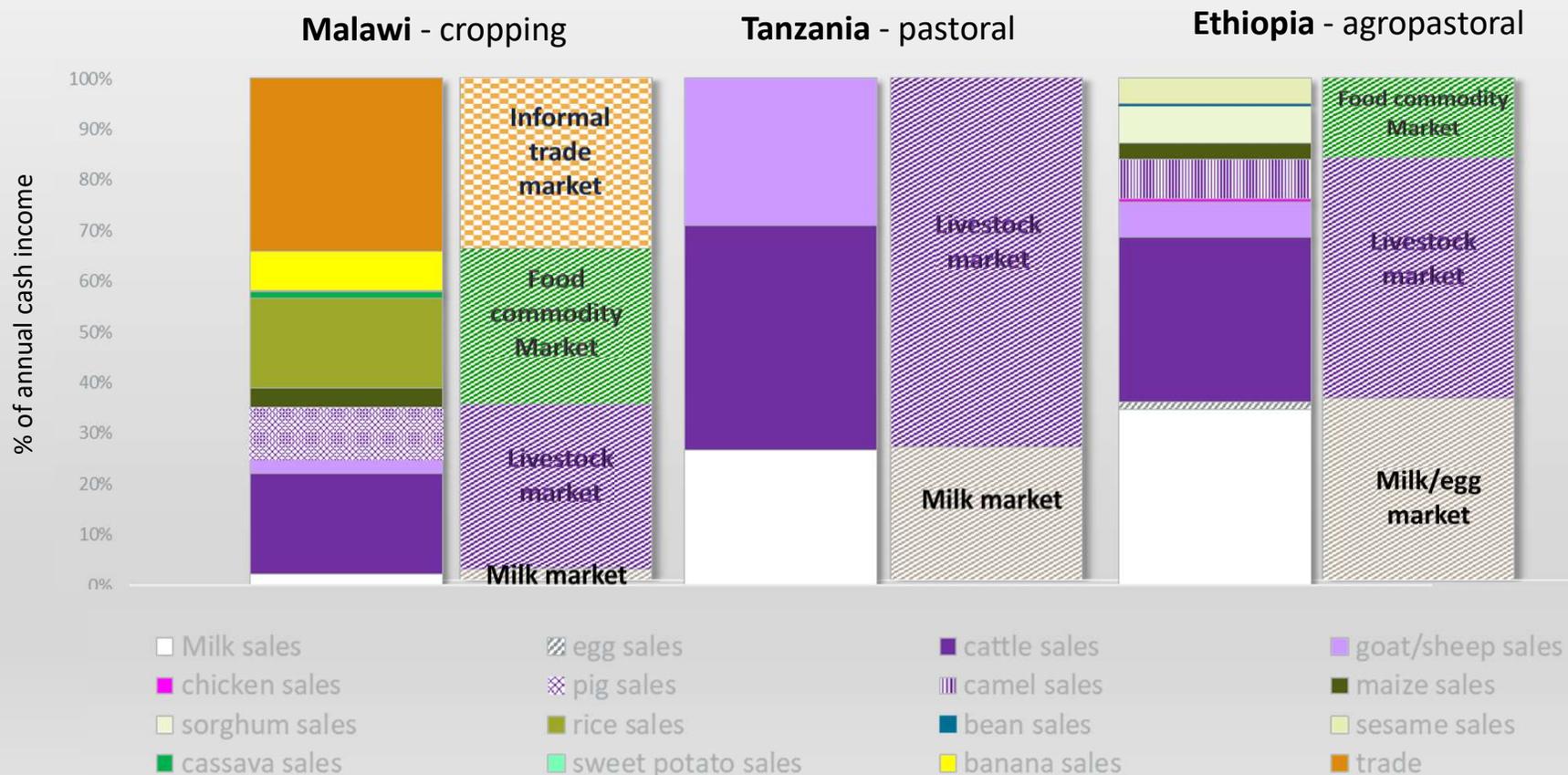
# Sources of Food: Poor Households



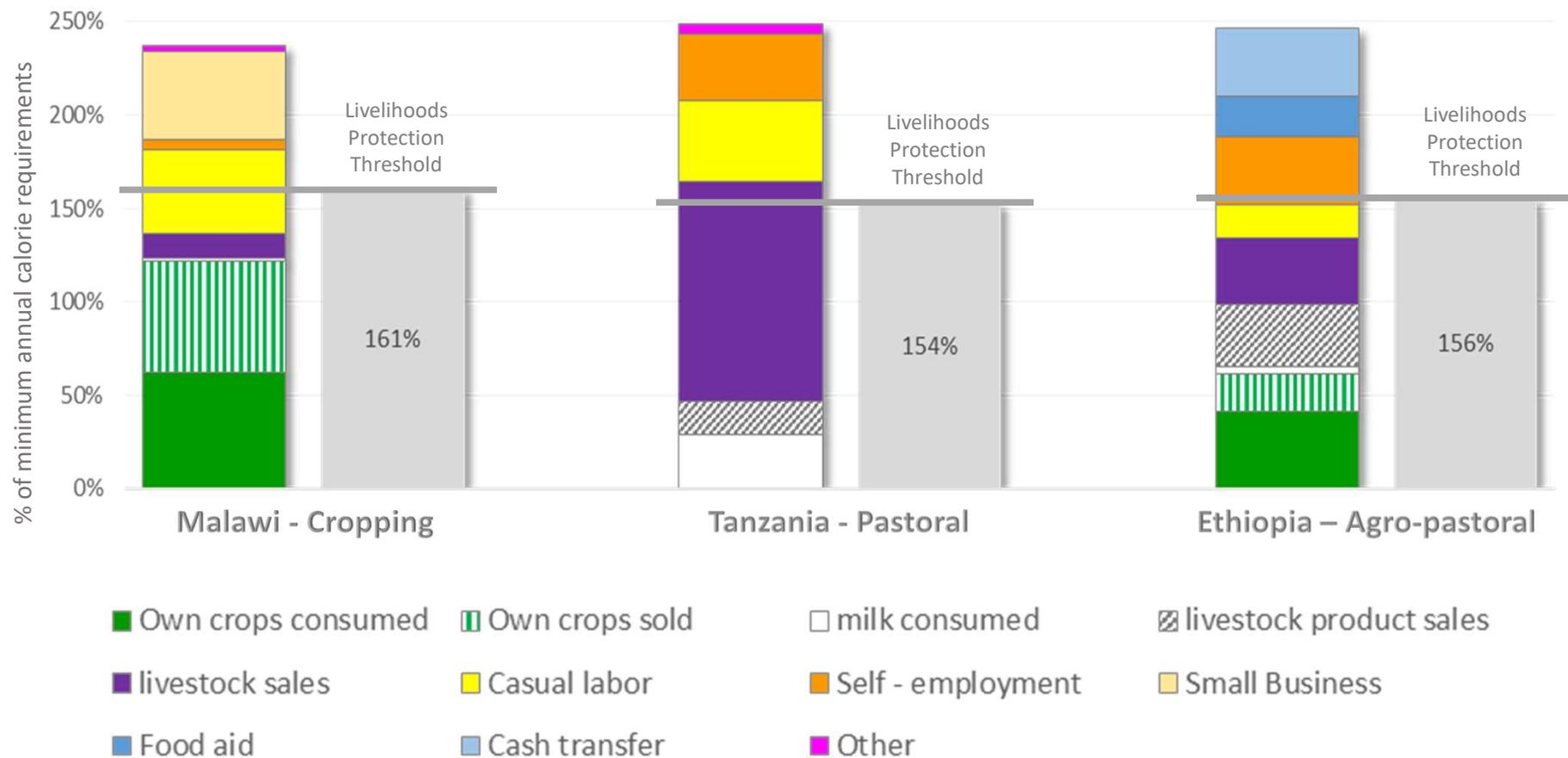
# Sources of Cash: Poor Households



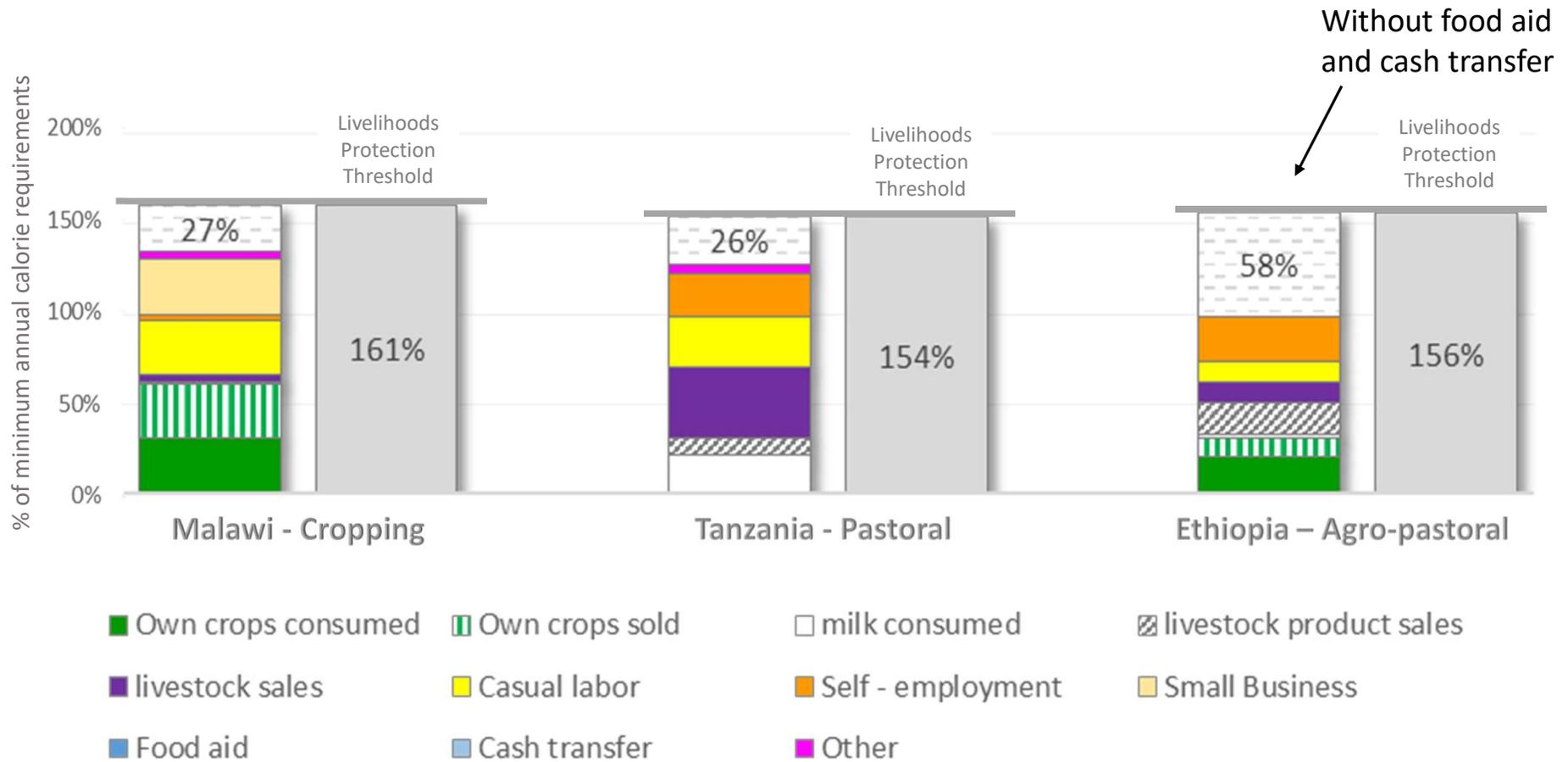
# Sources of Cash: Better Off Households



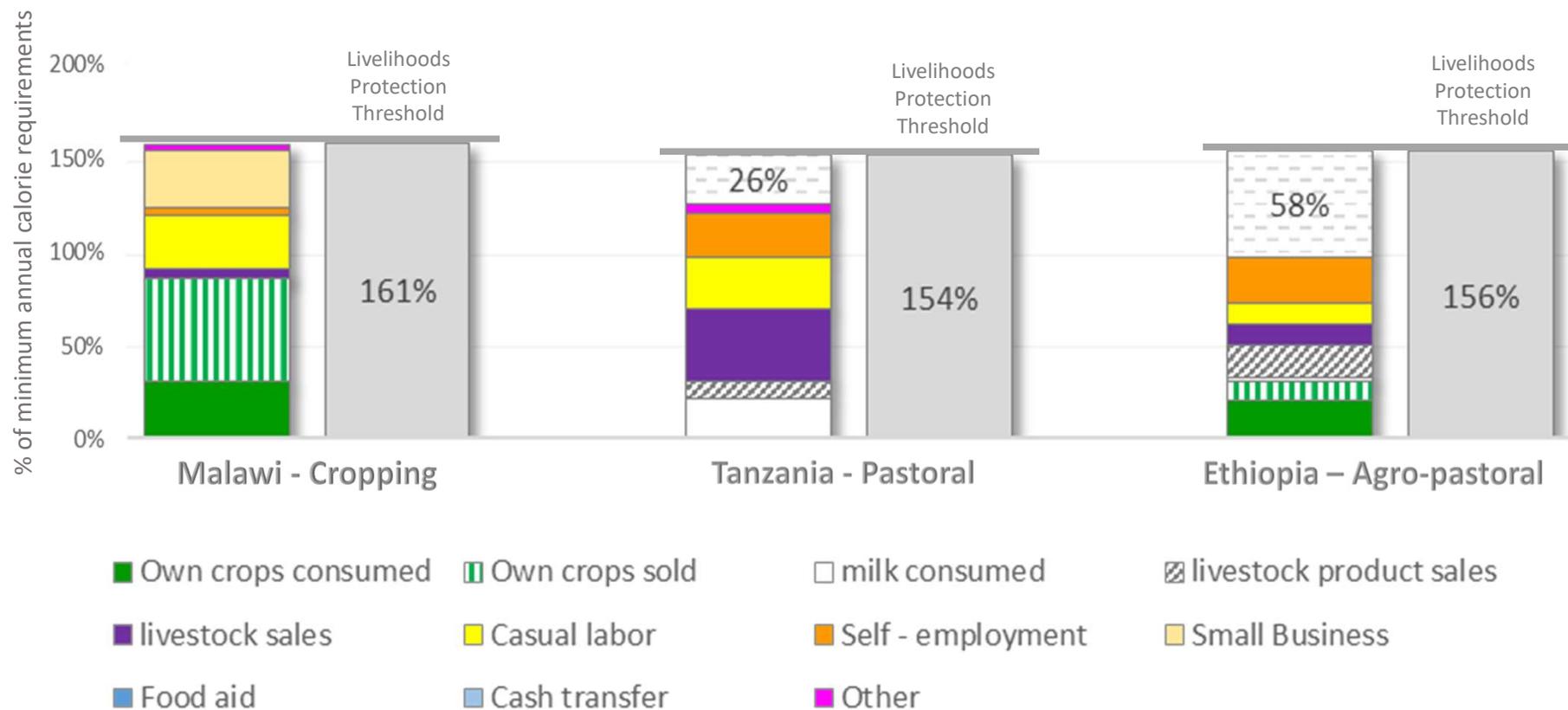
# Reference Year Total Income: Poor Households



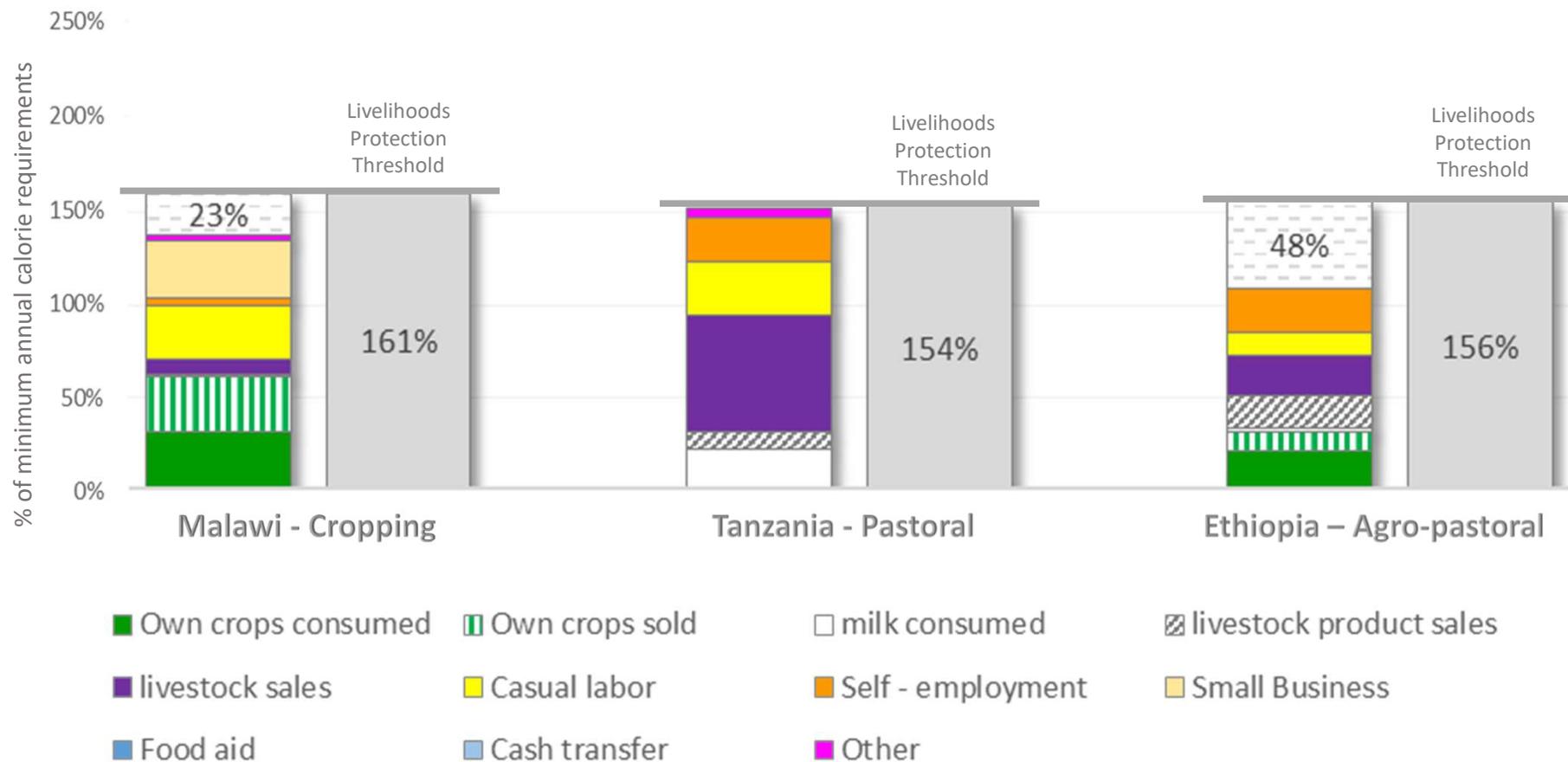
# Total Income: Drought Year



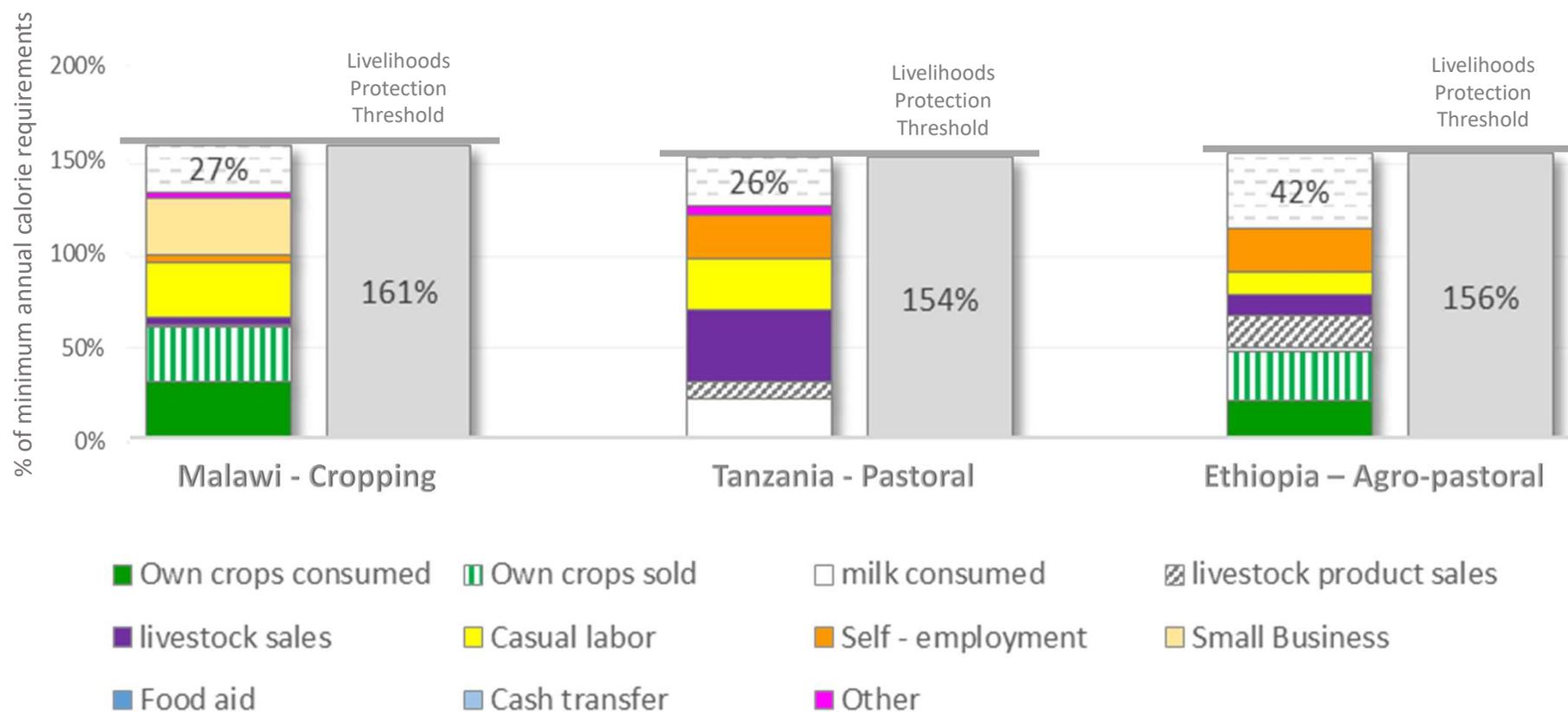
# Drought Year with Rice Market Support



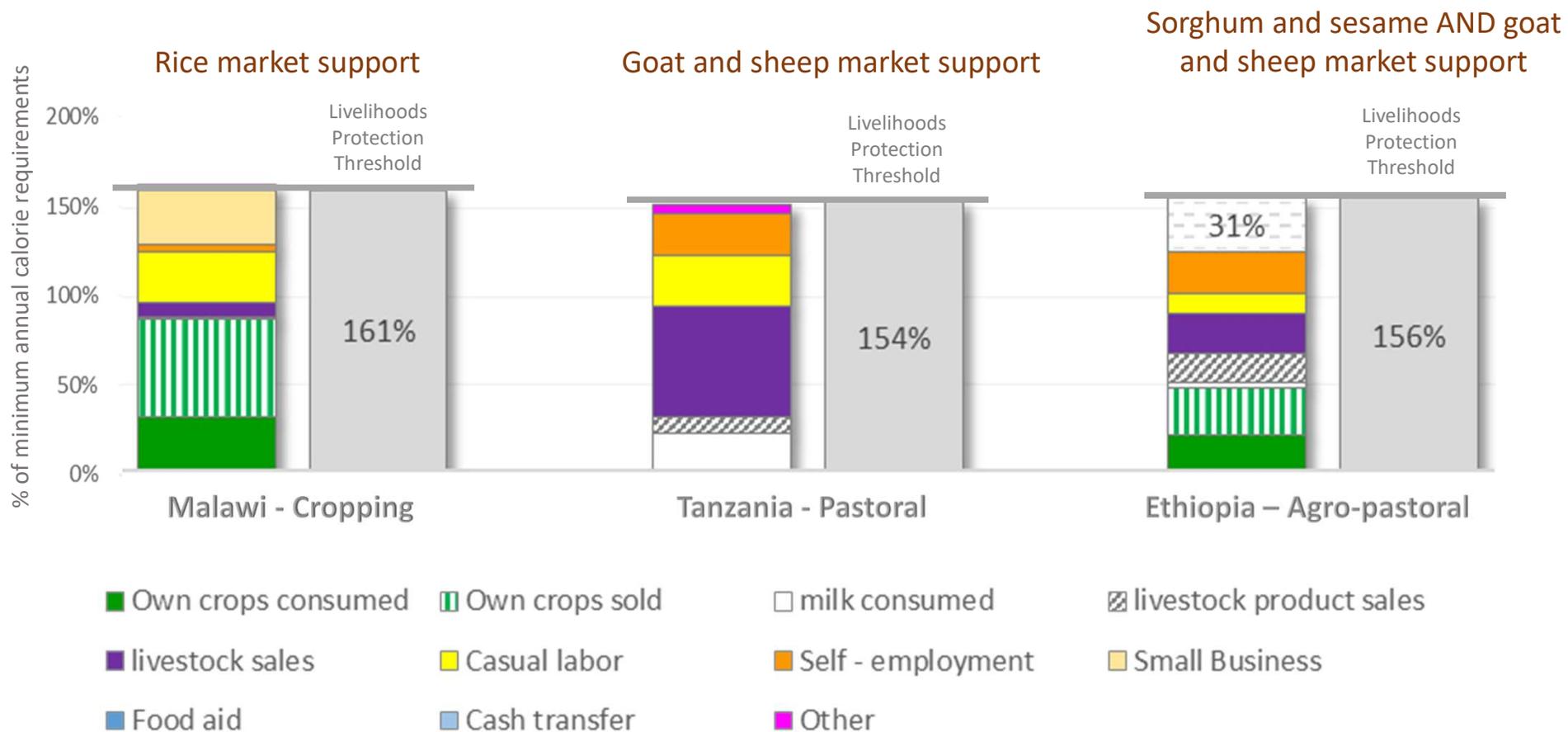
# Drought Year with Goat and Sheep Market Support



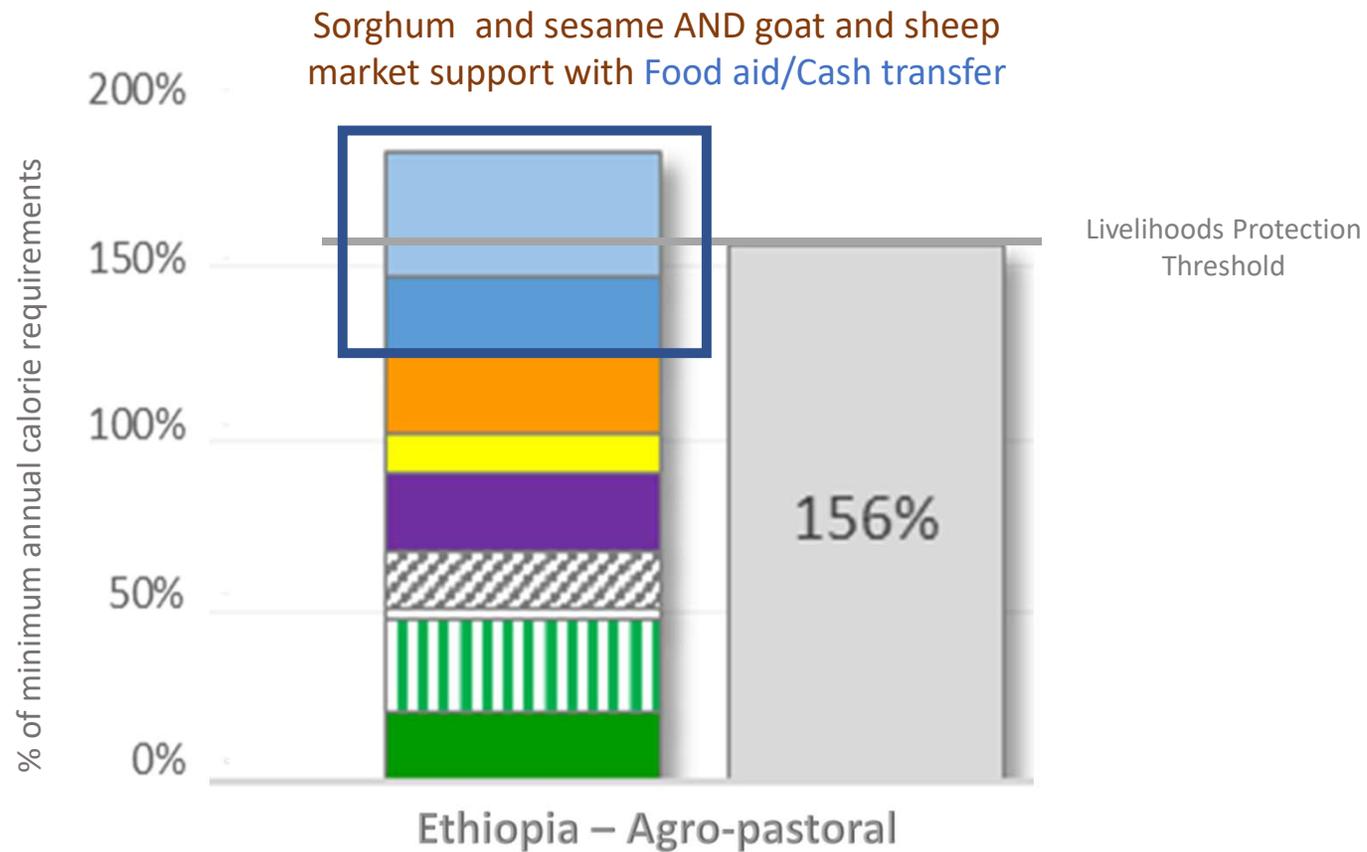
# Drought Year with Sorghum and Sesame Market Support



# Drought Year with Customized Market Support

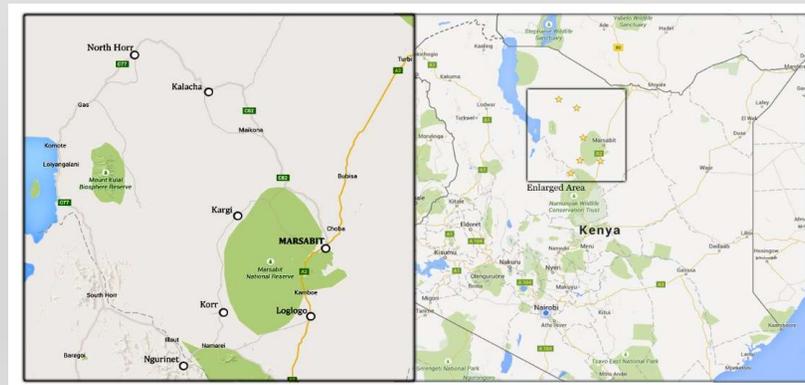


# Customized Market Support and Safety Net



# Sequencing of Livelihoods and Market Analysis

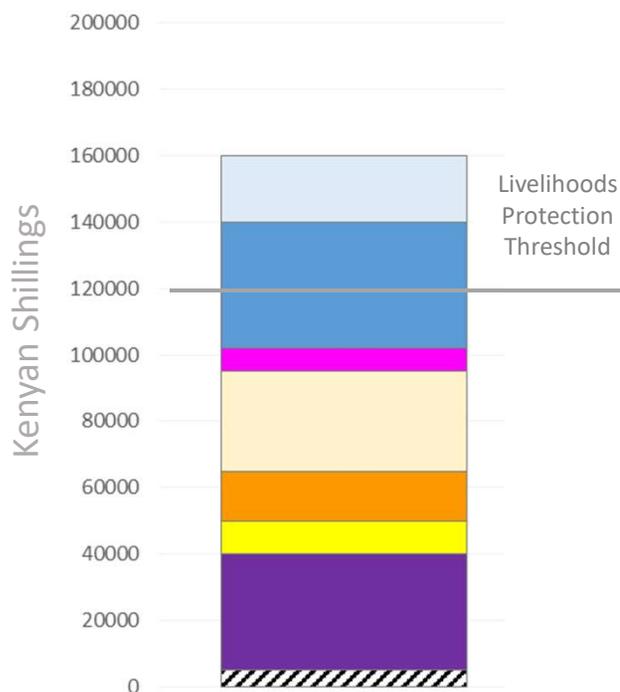
The Kenyan Financial Sector Deepening Trust (FSD), with support from FEG, piloted safety net graduation projects in two pastoral areas of northern Kenya using this approach.



# Sequencing of Livelihoods and Market Analysis

## Step 1 Develop HEA baseline to understand income profile of poor households

- project income
- cash transfer
- food aid
- wild foods
- gifts/remittances
- self employment
- local labor
- livestock sales
- milk sales

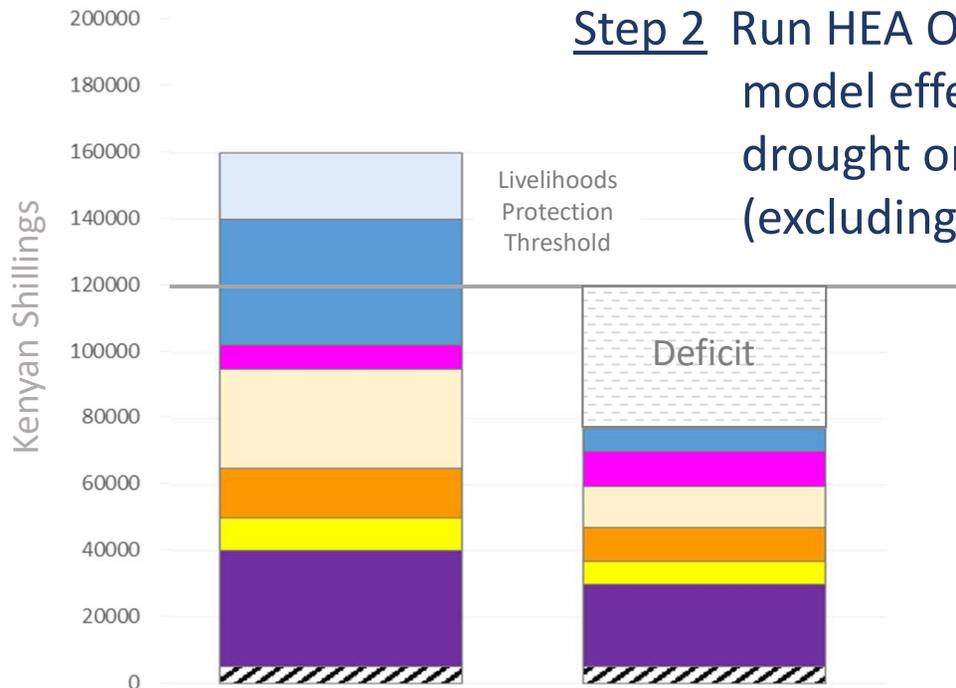


# Sequencing of Livelihoods and Market Analysis

Step 1 Develop HEA baseline to understand income profile of poor households

Step 2 Run HEA Outcome Analysis to model effects of a typical drought on total income (excluding external assistance)

- project income
- cash transfer
- food aid
- wild foods
- gifts/remittances
- self employment
- local labor
- livestock sales
- milk sales



# Sequencing of Livelihoods and Market Analysis

**Step 3** Business plan development, to determine income, expenditure and net profit from each income generating activity

Camel Milk Sales					
	L/month	Price/L	Cash/mth	# of mths	KES/year
Money from Sales	45	60	2,700	5	13,500
<b>Gross Profit</b>					<b>13,500</b>
<b>Recurring Costs</b>					
					Annual estimate/camel
Less Triquin					1,260
Less Oxytetracycline					600
Less De-wormer - albendazol 10%					170
Less Multi-vitamin					3,650
Less Dip/spray					270
Less Camel (one time)					50,000
<b>Total Recurring Costs</b>					<b>55,950</b>
<b>Working Profit</b>					<b>(42,450)</b>

<b>Loan Repayments</b>		
	Monthly	Yearly
Less Startup loan interest	653	7,833
Less Total Loan Repayment	653	7,833
<b>Profit after Loan Repayment</b>		<b>(50,283)</b>

\* All of the recurring costs + the camel are included in the loan

## Income Generating Activities

- 1) Camel milk trading
- 2) Honey production
- 3) Honey trading
- 4) Fodder production
- 5) Goat trading
- 6) Irrigated vegetable production
- 7) Urea multi-bricks
- 8) Poultry rearing

# Sequencing of Livelihoods and Market Analysis

Step 4 Model how profit from each income generating activity is affected by drought



## IGAs

- 1) Camel milk trading
- 2) Honey production
- 3) Honey trading
- 4) Fodder production

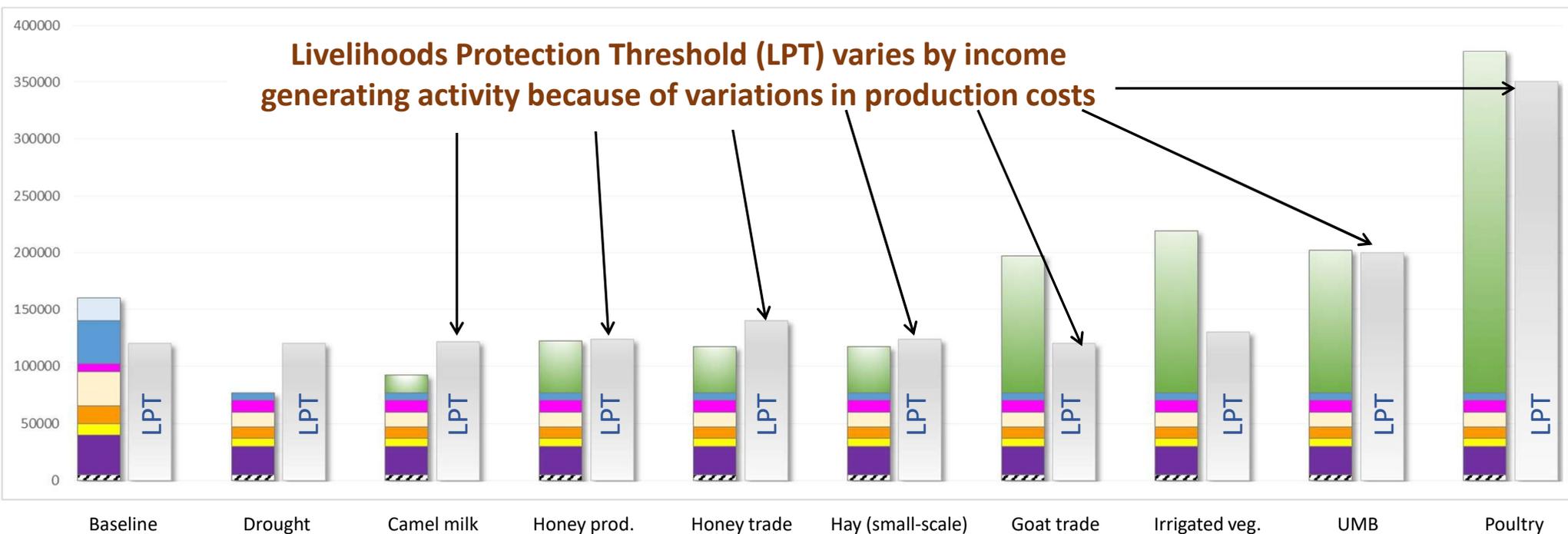
- 5) Goat trading
- 6) Irrigated vegetable production
- 7) Urea multi-bricks
- 8) Poultry rearing



# Sequencing of Livelihoods and Market Analysis

Step 5 Model contribution of drought-affected income from each income generating activity to total (drought-affected) income of poor households

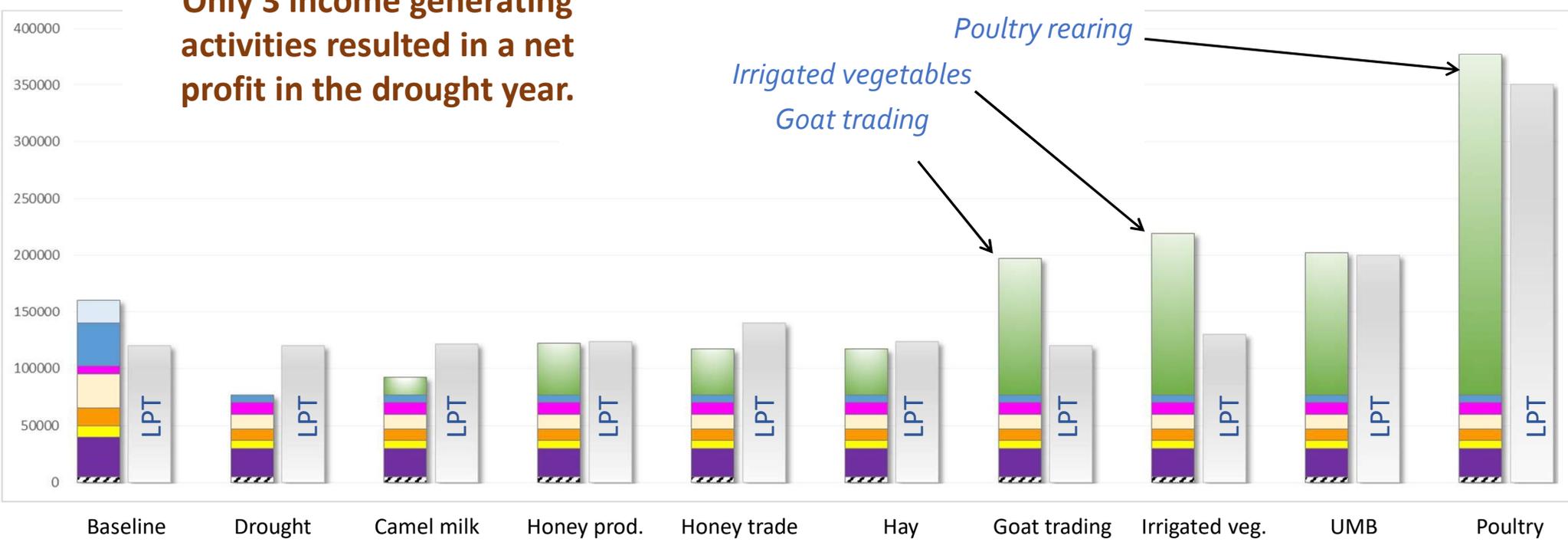
**Livelihoods Protection Threshold (LPT) varies by income generating activity because of variations in production costs**



# Sequencing of Livelihoods and Market Analysis

Step 5 Model contribution of drought-affected income from each income generating activity to total (drought-affected) income of poor households

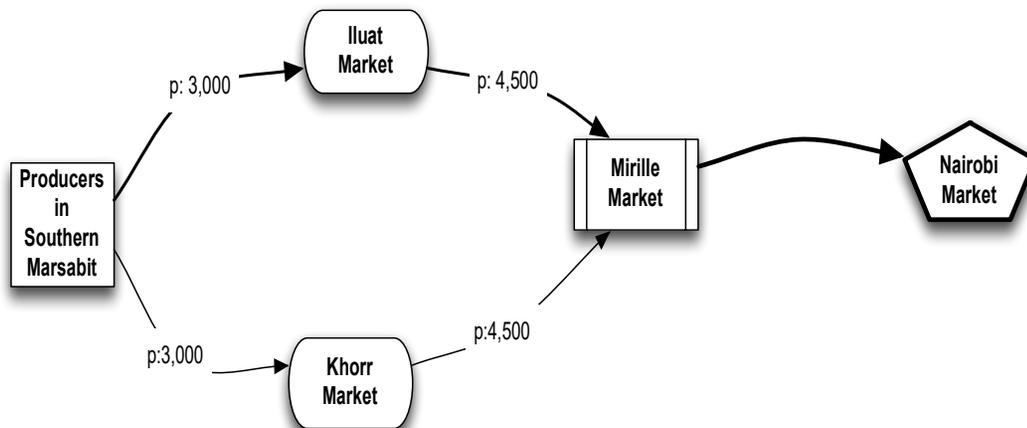
**Only 3 income generating activities resulted in a net profit in the drought year.**



# Sequencing of Livelihoods and Market Analysis

## Step 6: In-depth analysis of markets and constraints and opportunities

### Goat Trading: Market Map



Warriors

Transport

Market Price Information !

Savings

Credit !

Key constraints:

- Market Information
- Credit

Viable for poor and very poor households

Not viable for female-headed households without older male family members

# Sequencing of Livelihoods and Market Analysis

## Step 7: Address market-related constraints



In the case of goat trading:

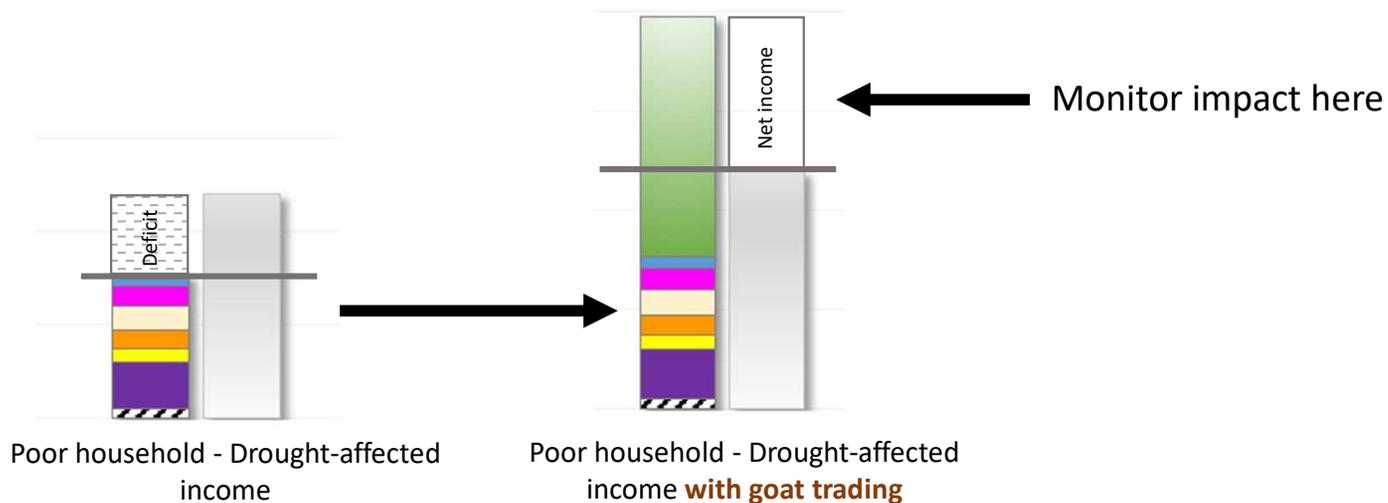
Develop customized market-monitoring system and ensure price information is accessible to poor households

Work with commercial bank to develop new targeted loan product

Explore options for reducing barriers for female-headed households

# Sequencing of Livelihoods and Market Analysis

## Step 8: Monitor impact at household level



## CONCLUSION

- The connections between livelihood systems and market systems provide powerful entry points for increasing resilience.
- We can hone the use of market-level interventions by grounding them in an understanding of livelihoods.
- Without this understanding, we run a high risk of missing the mark and/or causing unintended harm.

Thank you

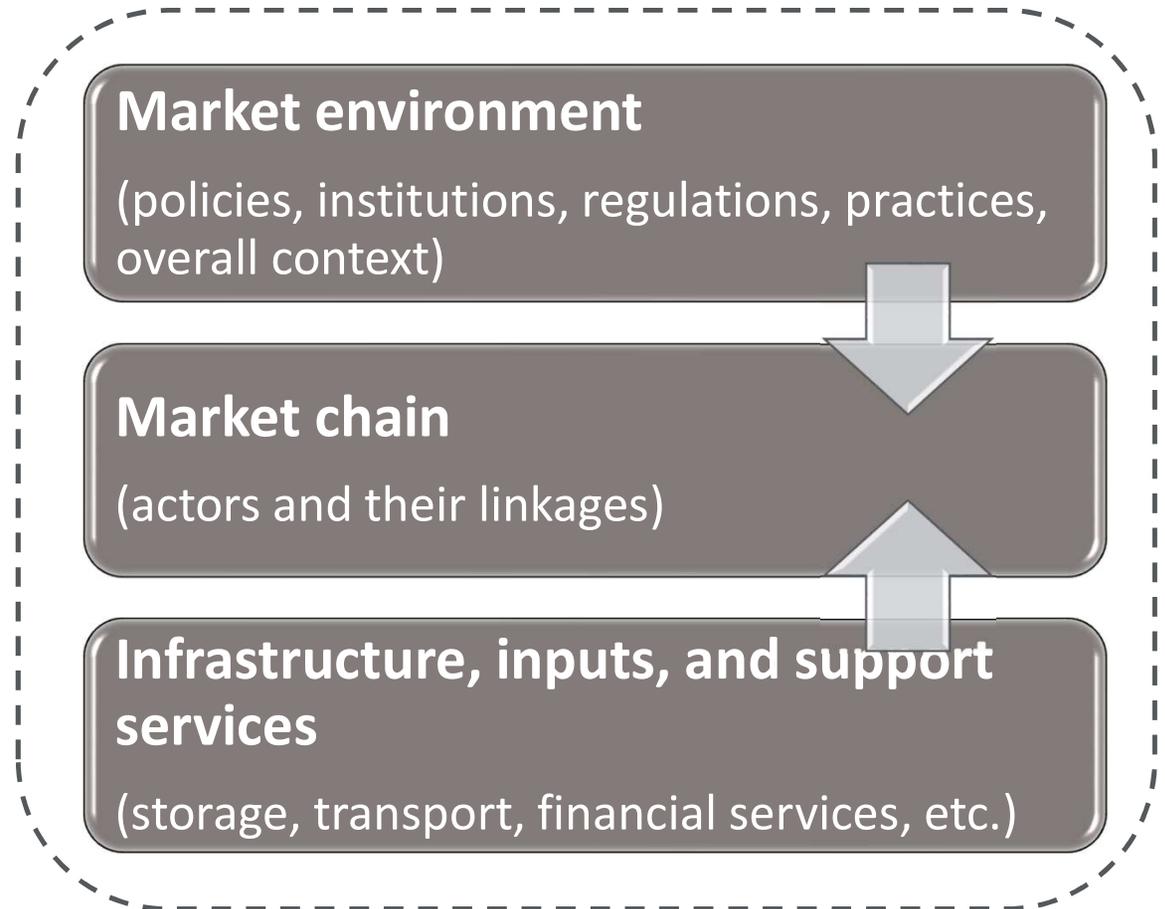
# Market Systems and Resilience: A Multi-country perspective

Gabriela Alcaraz  
Chemonics  
International



## Market system

Dynamic space in which different actors participate in the production, distribution, and consumption of goods and services



# Market system for rice (Haiti)

## Market environment

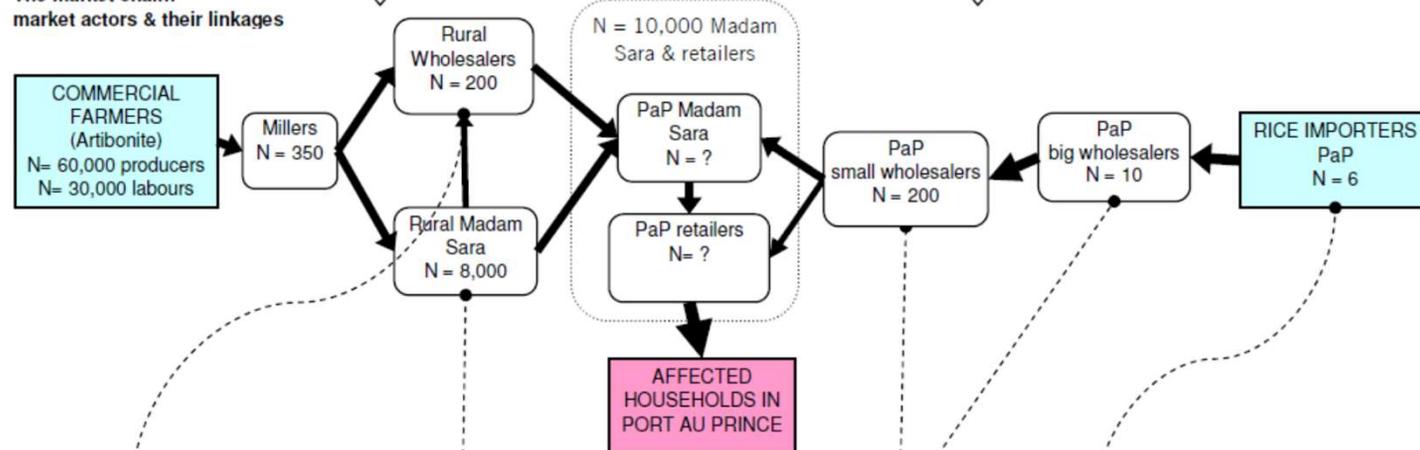
### Baseline Rice Market-system Map

The market environment:  
institutions, rules,  
norms & trends



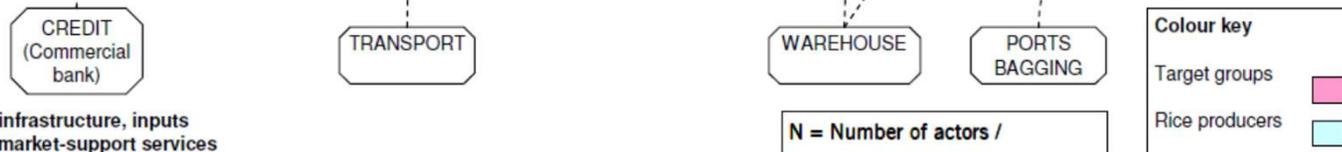
## Market chain

The market chain:  
market actors & their linkages



## Infrastructure inputs, and support services

Key infrastructure, inputs  
and market-support services



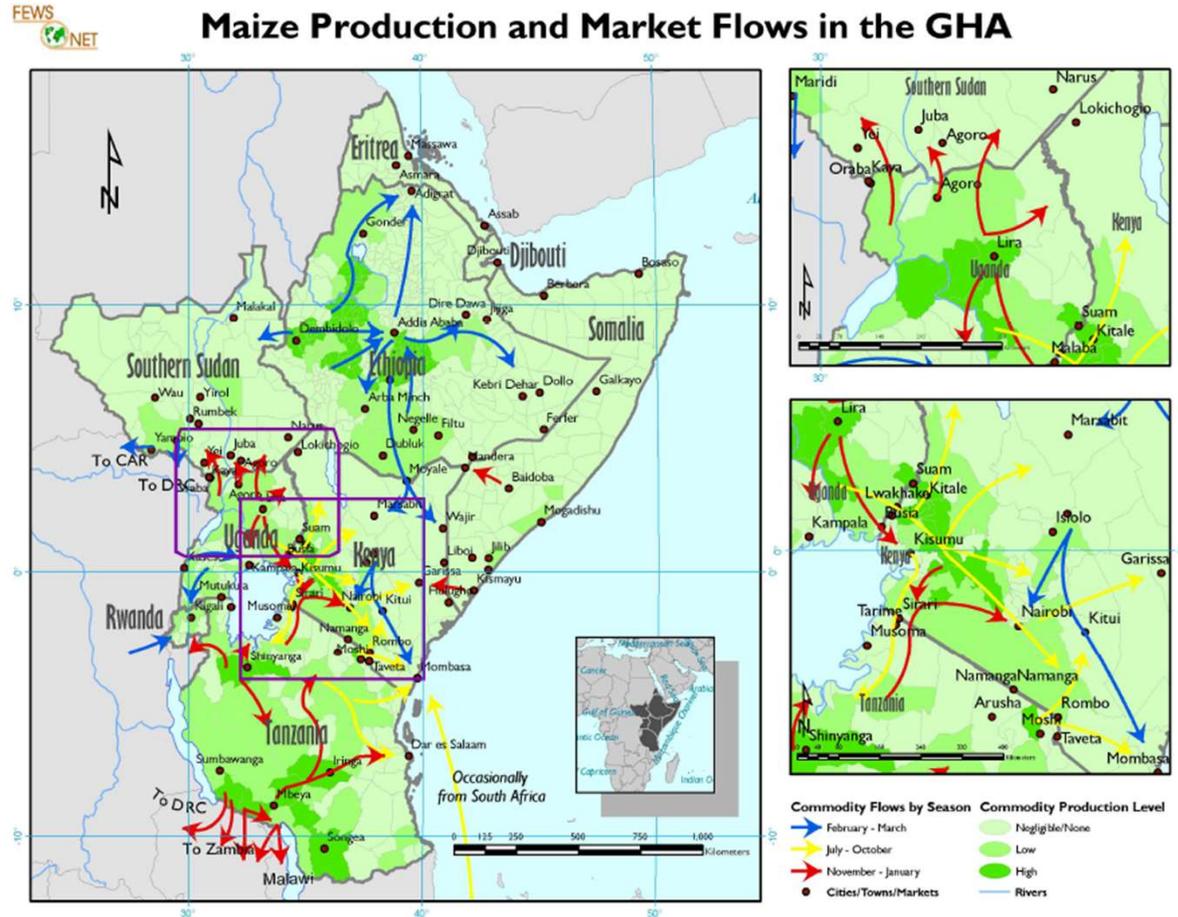
IRC et al (2010).

## Market system mapping

- Facilitates identification of critical aspects of the system
  - Inter-dependencies
  - Access (and lack of) to resources
  - Potential bottlenecks
- Helps understanding how shocks/stresses can affect the system and which aspects could be strengthened to increase resilience

Multi-scale  
system:  
example  
Greater Horn  
of Africa (GHA)

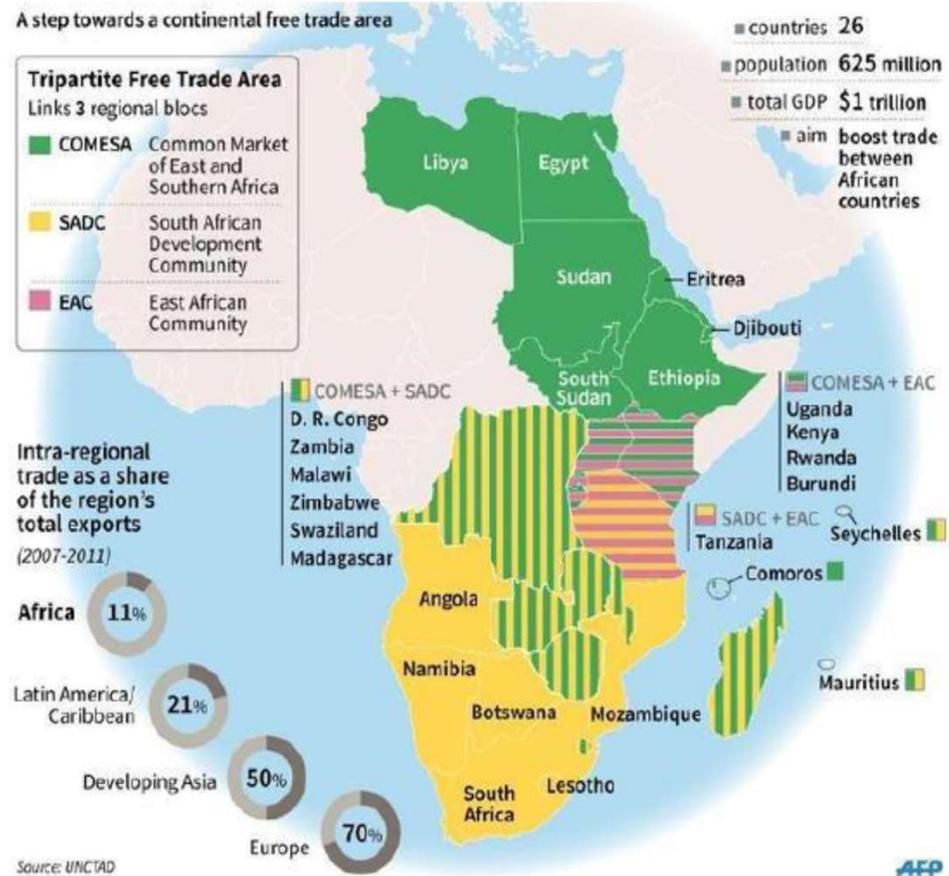
Production and  
trade linkages



FEWS NET (2008).

# .... GHA

Regional market environment: integration



George (2016) after AFP.

## .... GHA

### Regional infrastructure and services

### Import / export road infrastructure

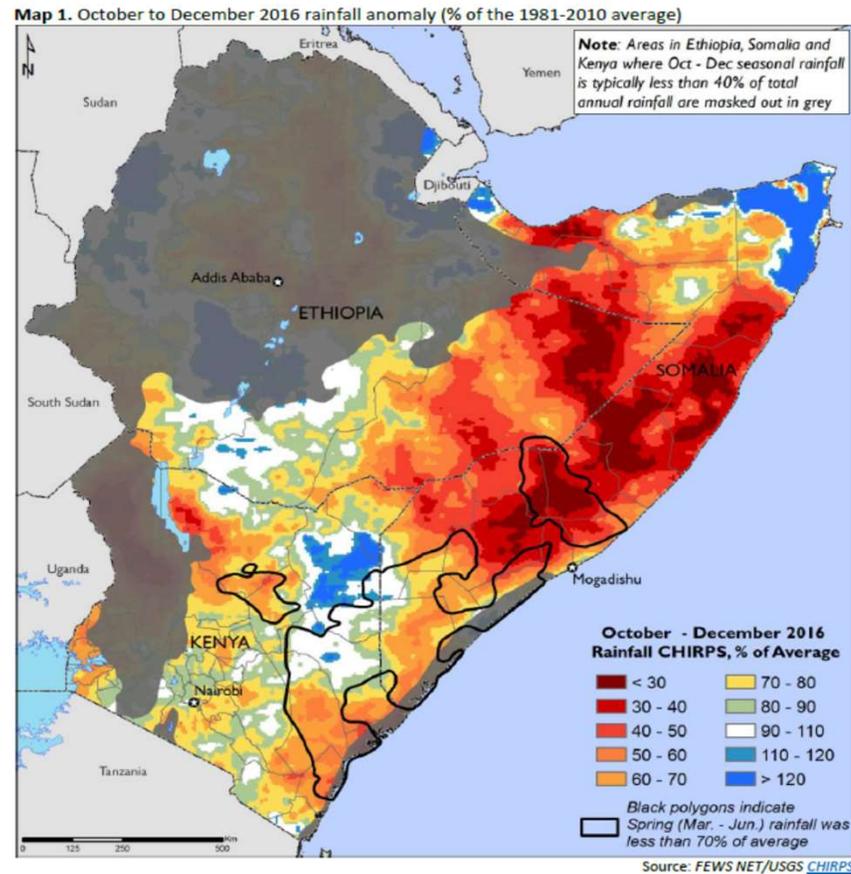
Corridor	Length	Links
Northern	1,700 km 99% paved	Mombasa (KE), Kenya, Uganda, Rwanda, Burundi, Eastern DRC
Central	1,300 km 70% paved	Dar es Salaam (TZ), Tanzania, Zambia, Rwanda, Burundi, Uganda, Eastern DRC

AfDB (2013).

But maintenance is an issue, contributing to high transport cost and time (2013, up to 15% in good condition)

## ... GHA: Shocks

Adverse climatic events

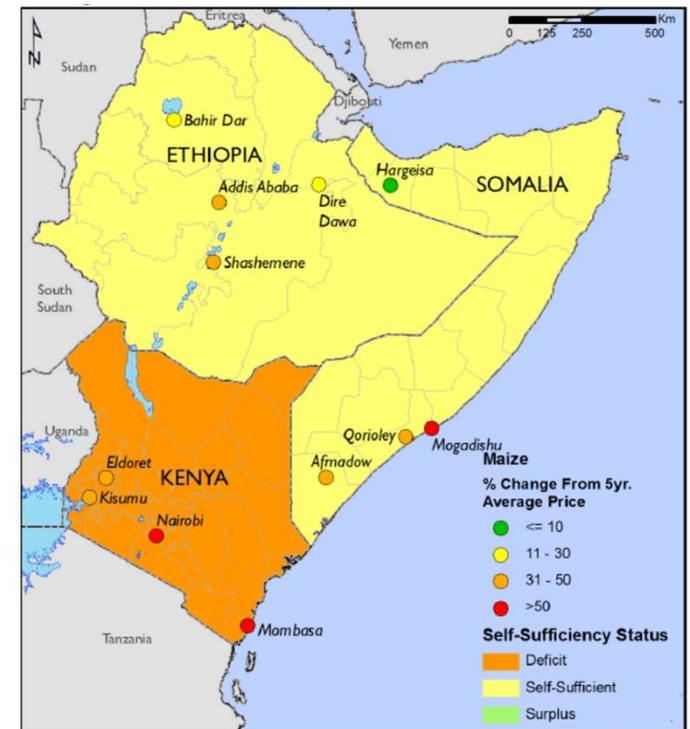


FEWS NET (2017).

## Recent shocks in GHA

- Drought
  - Reduced regional supply
  - Considerable livestock losses
  - Temporary export restrictions in sourcing countries
  - Increased prices
  
- Conflict
  
- Macroeconomic context

Maize prices, May 2017  
(vs. 5 year average)



Source: FEWS NET

FEWS NET (2017).

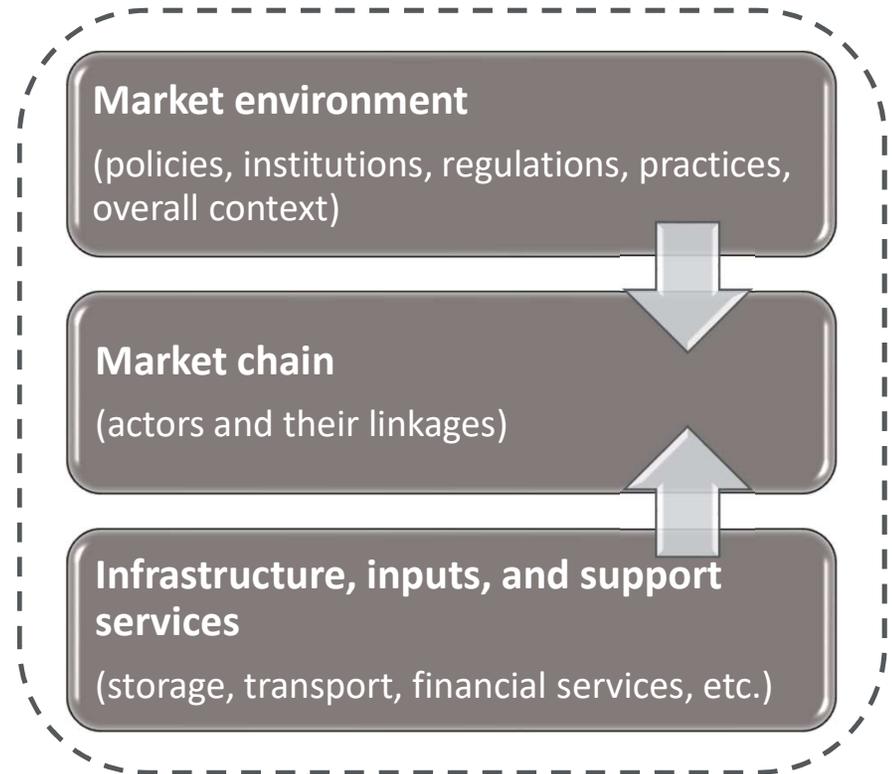
## Resilience and multi-country market systems

Key for resilience: **ability to manage, adapt, and/or change** in face of a [potential] shock/stress

Who?

To what?

How?



## Building resilience through markets, some thoughts:

- Who? Which market actors?
    - Cereal producers in Uganda, Tanzania, Ethiopia
    - Cross-border traders
  - To what?
    - Adverse climatic events (drought)
    - Trade disruption (conflict, poor infrastructure)
  - How?
    - Facilitation of trade (harmonization of rules)
    - Livelihood diversification, resource management
    - Infrastructure improvements
    - Peace building
- ✓ Flexible
  - ✓ Collaborative
  - ✓ Risk reduction oriented

# Resilience of Agricultural Value Chains

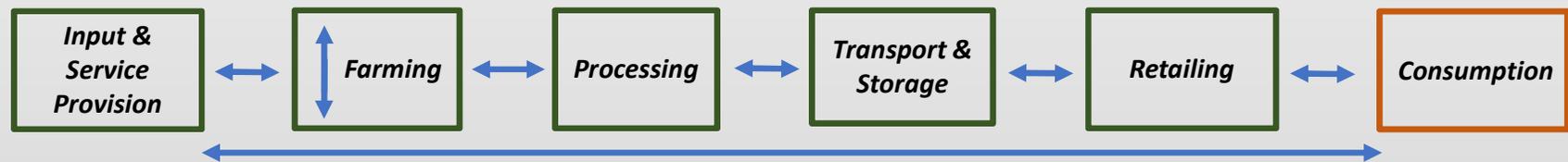
Ryan Vroegindewey

July 10, 2018

Roundtable on Resilience and Market Systems

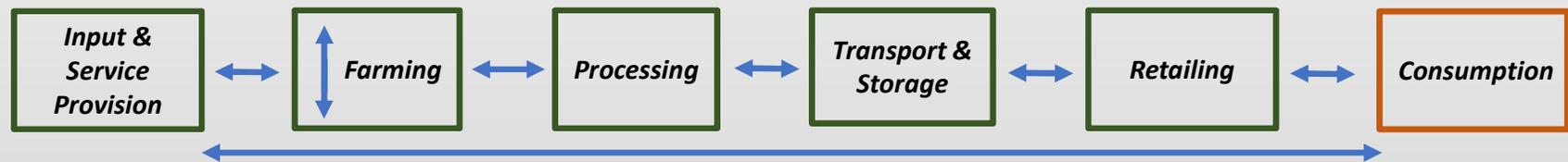
# Motivation & Conceptualization

Resilience of agricultural value chain (VC) may be a key mediator of household resilience and food security, and can strengthen VC competitiveness.



# Motivation & Conceptualization

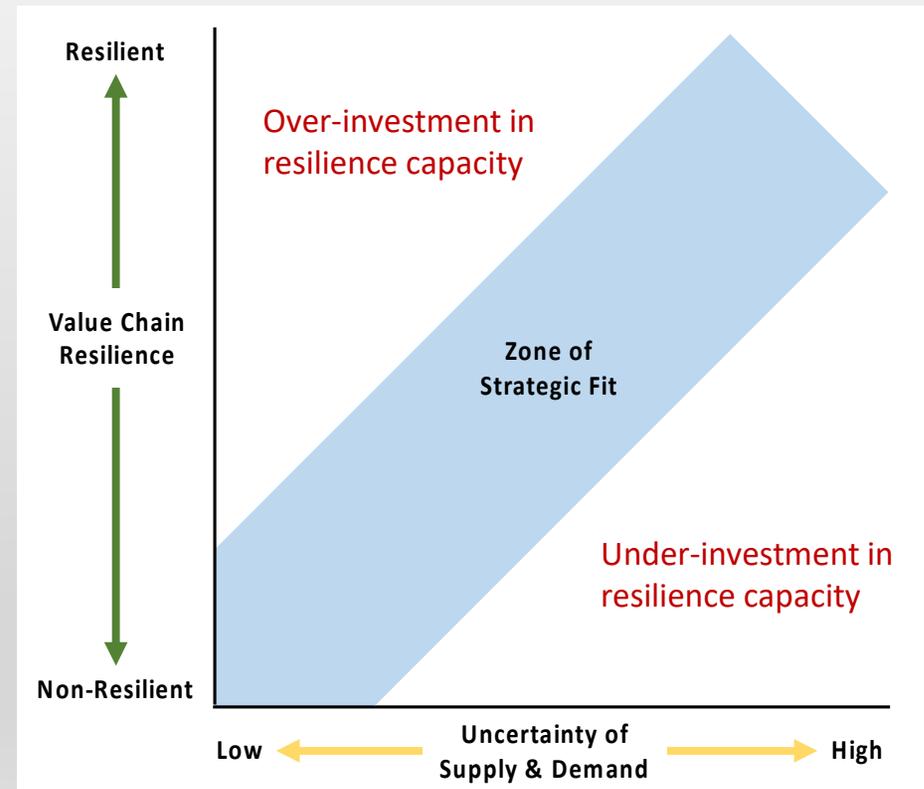
Resilience of agricultural value chain (VC) may be a key mediator of household resilience and food security, and can strengthen VC competitiveness.



# *To what degree* should we build VC resilience?

Building and maintaining resilience has direct costs and trade-offs with other dimensions of VC performance.

Appropriateness of building resilience depends on what products/services stakeholders value, supply and demand uncertainty, and existing resilience capacity.



Adapted from Chopra and Meindl (2016)

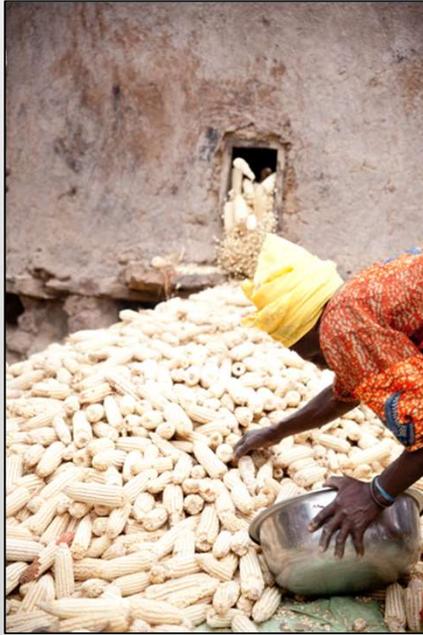
# How do we build VC resilience?

	<u>Resilience-building principles</u>	<u>Supply Chain Management</u>	<u>Hypothetical Upgrades to Agricultural VCs</u>
<b>VC RESOURCES</b>	<ol style="list-style-type: none"> <li>Maintaining diversity &amp; redundancy</li> <li>Managing connectivity</li> <li>Managing slow variables &amp; feedbacks</li> </ol>	<ul style="list-style-type: none"> <li>Flexibility; resource redundancy</li> <li>Short vs. long chains</li> <li>Agility; visibility; response velocity</li> </ul>	<ul style="list-style-type: none"> <li>Diversity in suppliers/buyers and products/markets; excess capacity and stocks</li> <li>Infrastructure &amp; communications; traceability</li> <li>Remote sensing; chain-wide monitoring; information-sharing</li> </ul>
<b>VC INSTITUTIONS</b>	<ol style="list-style-type: none"> <li>Fostering complex adaptive systems thinking</li> <li>Encouraging learning</li> <li>Broadening participation</li> <li>Promoting polycentricity in systems governance</li> </ol>	<ul style="list-style-type: none"> <li>Creating a resilience culture; leadership, innovativeness</li> <li>Collaboration</li> </ul>	<ul style="list-style-type: none"> <li>Considering environmental footprint; experimentation and evaluation</li> <li>Inclusion of entire VC in strategic planning; layered institutions; coordination with food assistance agencies; social capital</li> </ul>

Kamalahmadi & Parast (2016); Biggs, Schuller, & Schoon (2015); Hohenstein et al. (2015); Tukamuhabwa et al., (2015)

# Where should we build VC resilience?

More of



or



?

A question of comparative advantage, equitable participation, and coordination across the VC.

# Advancing Understanding

- Case studies to understand the mechanisms of resilience.
- Development of quantitative measures, and empirical estimation of costs and effects on other dimensions of performance.
- Integration into VC strategic analysis. Vroegindewey & Hodbod (2018)



Thank you

