

# Off-farm income in Ethiopia and Resilience

Evidence from households in Amhara  
and Tigray Regions

FEG

THE FOOD ECONOMY GROUP

# HEA Baseline Database

As of July 2016, there are more than 500 HEA baselines completed.

In many areas we now have two full sets of comparable livelihoods baseline data spaced 10 years apart.



# Off-farm income in Ethiopia

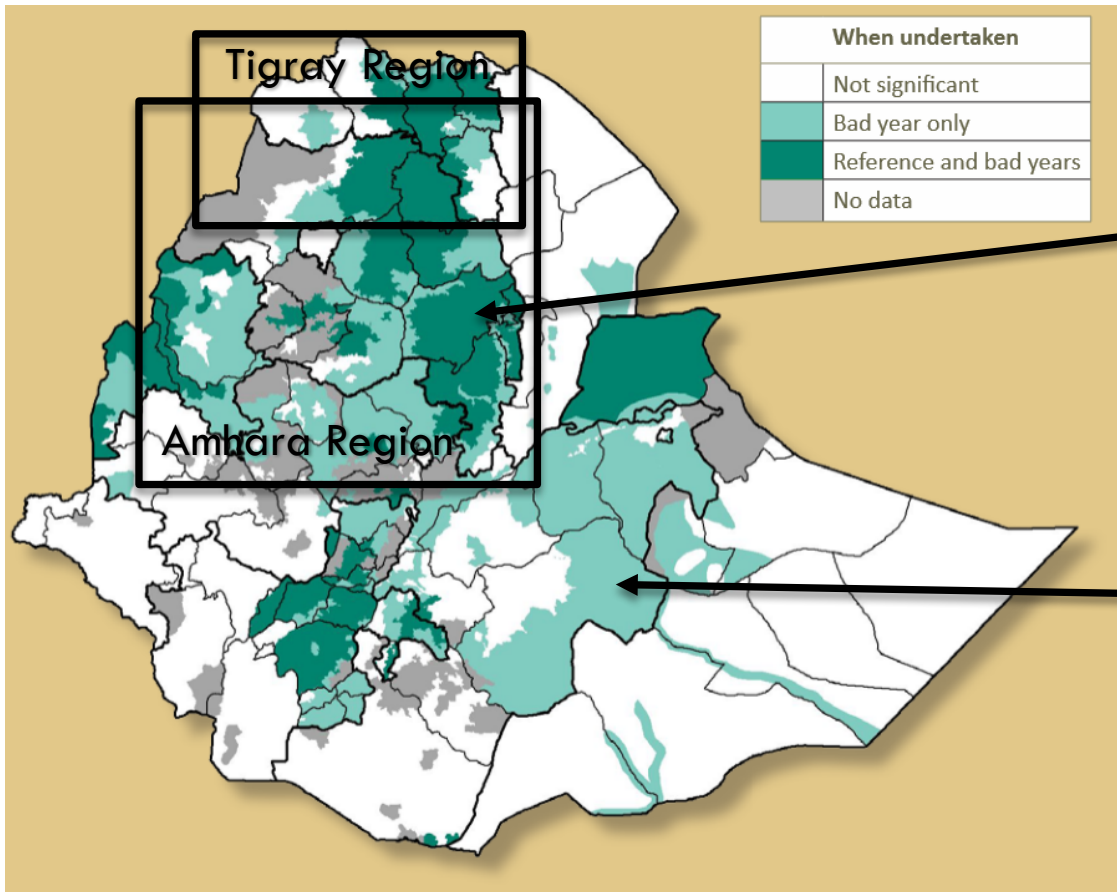
This presentation offers evidence on the importance of off-farm income for poorer households in Ethiopia.

The data to inform this presentation comes from Household Economy baseline datasets from two periods of time, around a decade apart, in Amhara and Tigray Regions.

The Tigray case explores whether an increasingly diverse off-farm income portfolio has improved households' resilience in the face of drought.

# Migratory labor is a critical component of income for poor households in Ethiopia

Areas where migratory labor is a source of cash income



Places where it is undertaken every year (dark green)

Places where it is typically only a bad year strategy (light green)

# Reliance on off-farm income varies by wealth group

As an average for the region, off-farm casual labor accounts for 20-30% of annual cash income for very poor and poor households in a typical year.

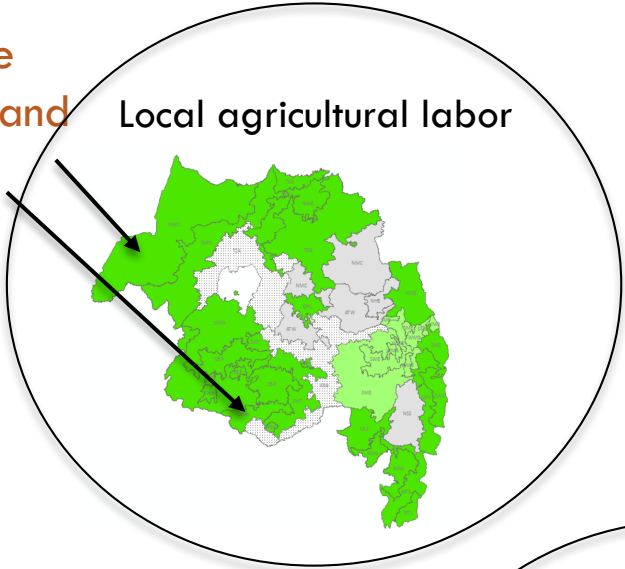
But in some livelihood zones it accounts for as much as 70% of all cash income.

Sources of Cash Income in the 2014-2015 Reference Year  
Amhara Regional Average

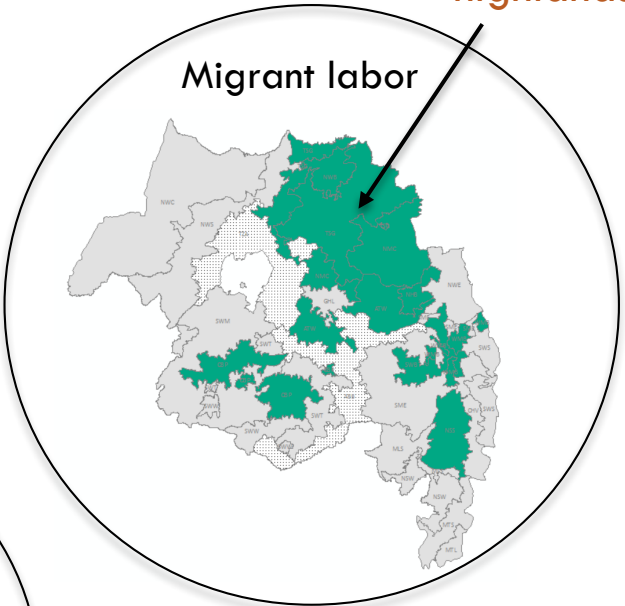


# Casual labor in Amhara can be broken into three categories

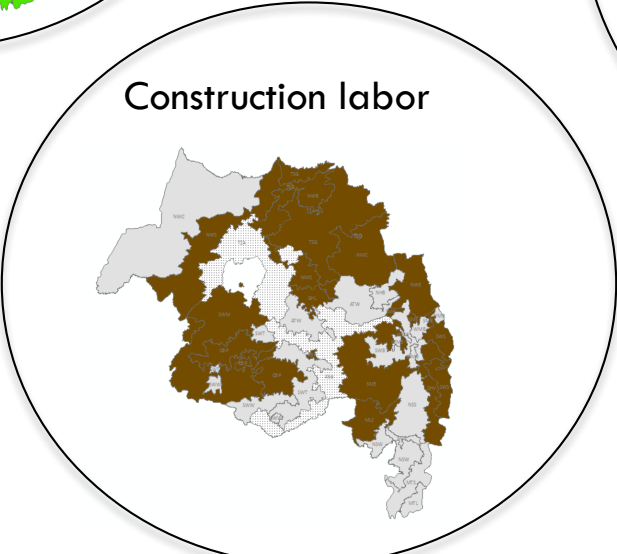
Productive lowlands and highlands



Food insecure highlands



Construction labor



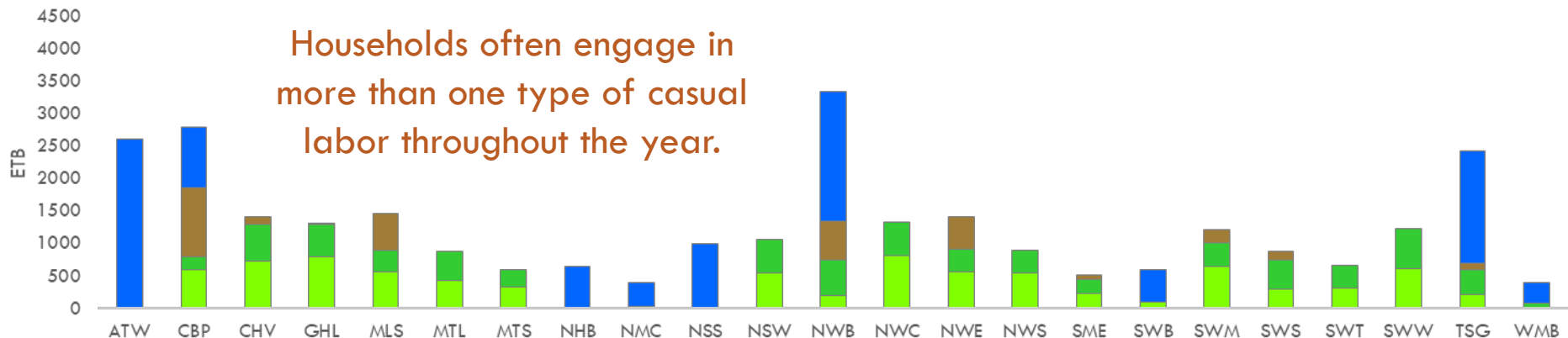
Construction linked to rapid growth of regional towns and Addis Ababa

Poorer wealth groups have been migrating seasonally from these areas for decades.

# Each type of casual labor is linked to a different source of demand.

Cash Income from Casual Labor Market, by market type  
 Weighted Average by Livelihood Zone  
 2014-2015 Reference Year


Households often engage in more than one type of casual labor throughout the year.



Local demand from middle and better off households

Demand mainly from regional towns and Addis Ababa

Demand mainly from large farms in western Tigray, Oromia and elsewhere.



It is important to understand the demand side of the off-farm equation.

A shock to any of these labor markets will have a direct impact on households' food and livelihood security and ultimately their resilience.

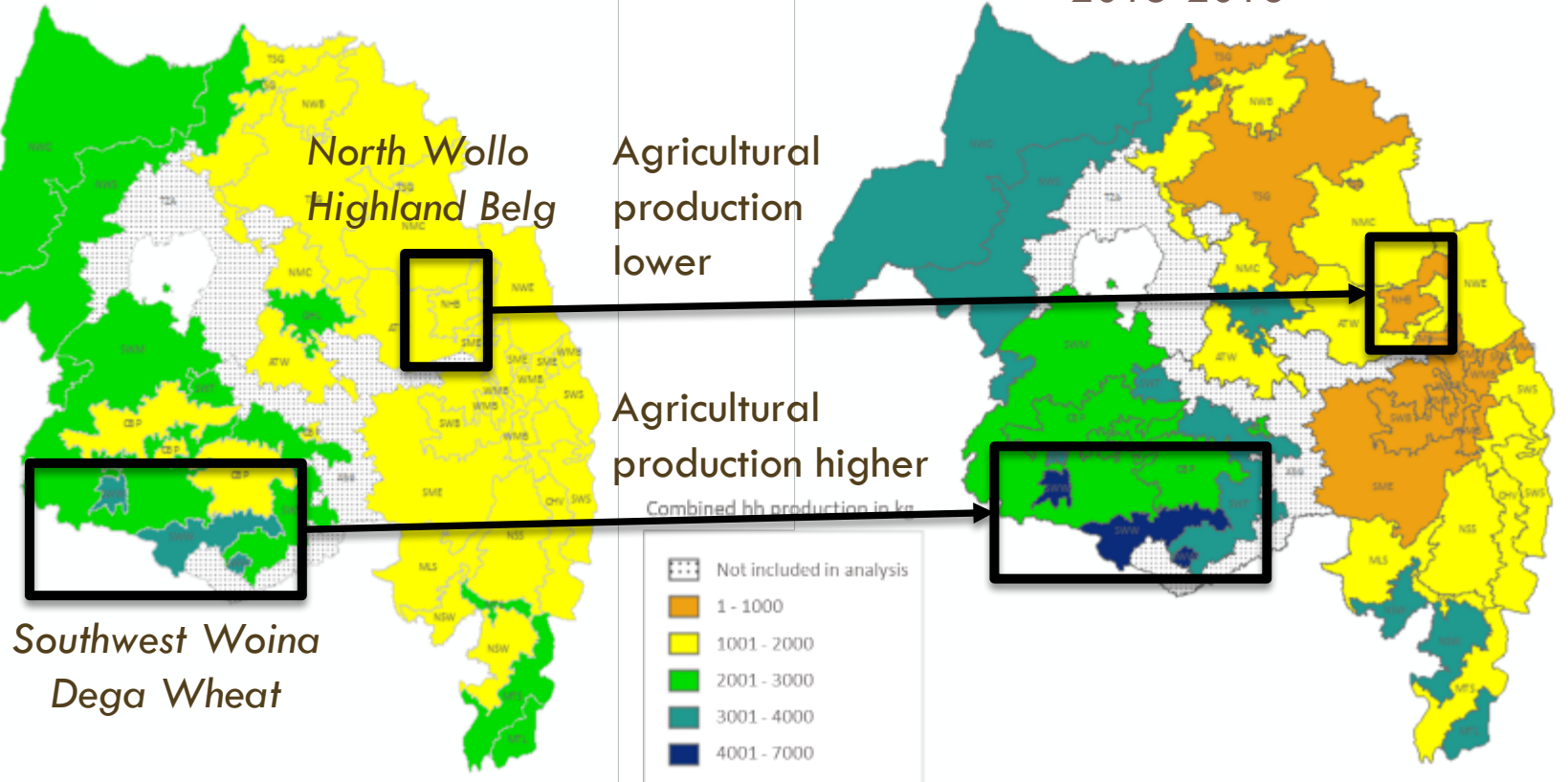


# Changes in production vs local agricultural labor

Combined household crop production (cereals, pulses, oil crops, tubers) in kg  
Weighted average by livelihood zone

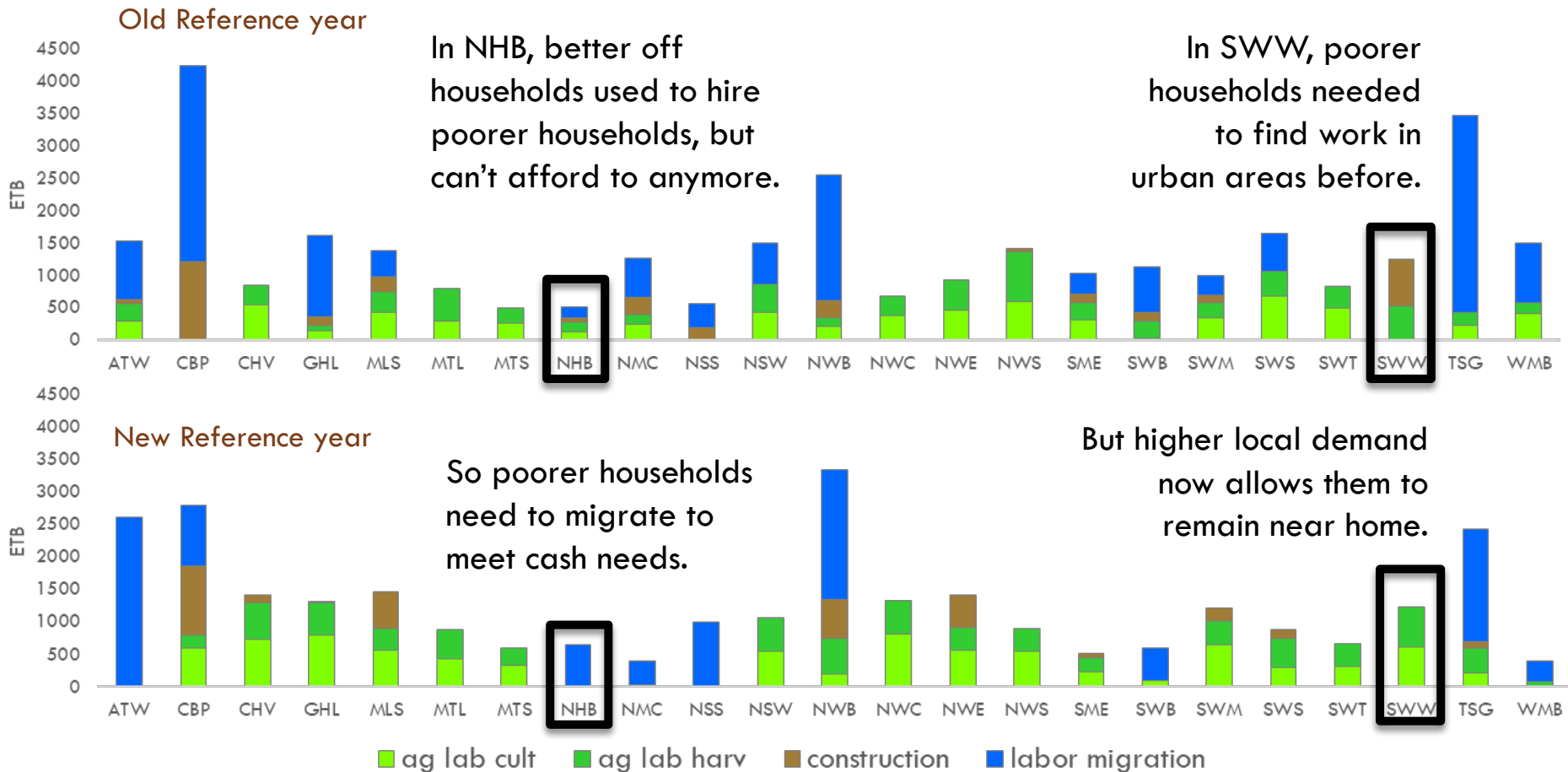
2005-2006

2015-2016



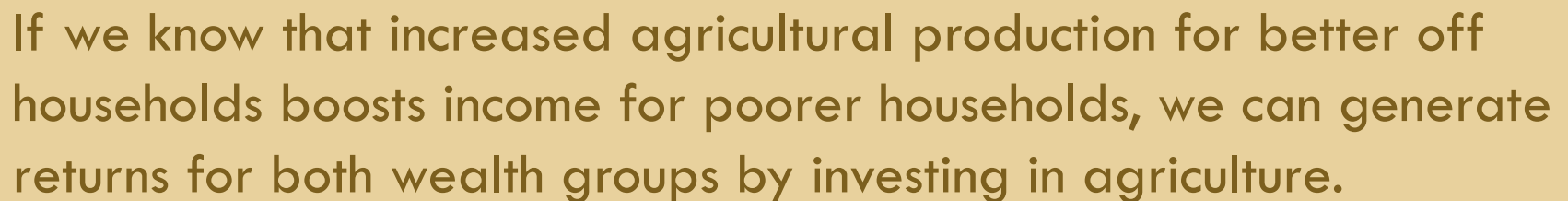
# On-farm intensification by one wealth group affects off-farm options option for another

Cash Income from Casual Labor Market, by market type: *Weighted Average by Livelihood Zone*





Understanding the links between households  
within a community helps us leverage  
existing relationships to build resilience.



If we know that increased agricultural production for better off households boosts income for poorer households, we can generate returns for both wealth groups by investing in agriculture.

# The costs of off-farm income need to be factored in.

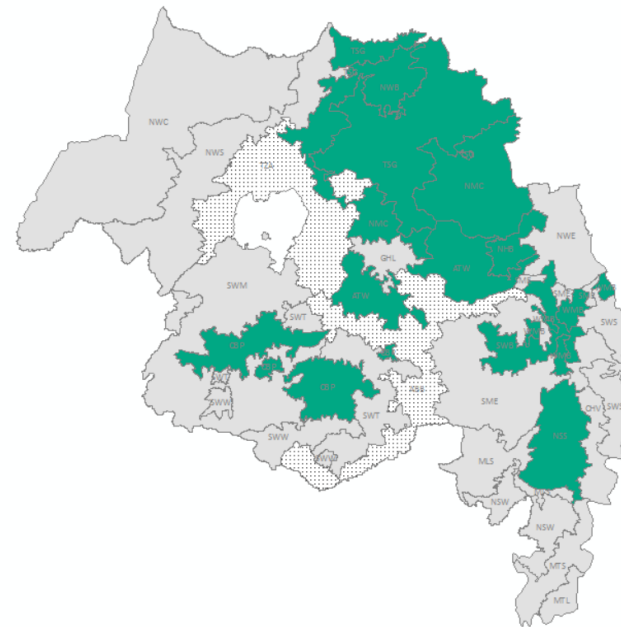
For example....


Areas to which people migrate are often in the lowlands, where malaria is rampant.

Costs of transportation and living away from home eat away at profits.

There are social costs to splitting up families, and an extra burden is placed on women left behind.

Migrant labor

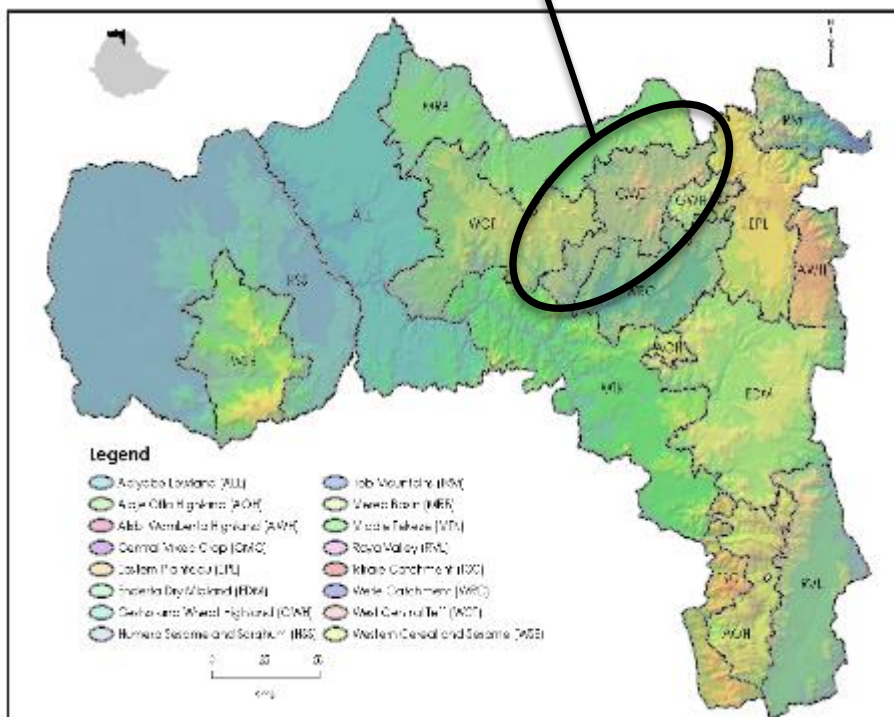




All off-farm income activities have costs associated with them. These need to be understood and weighed against the income gains.

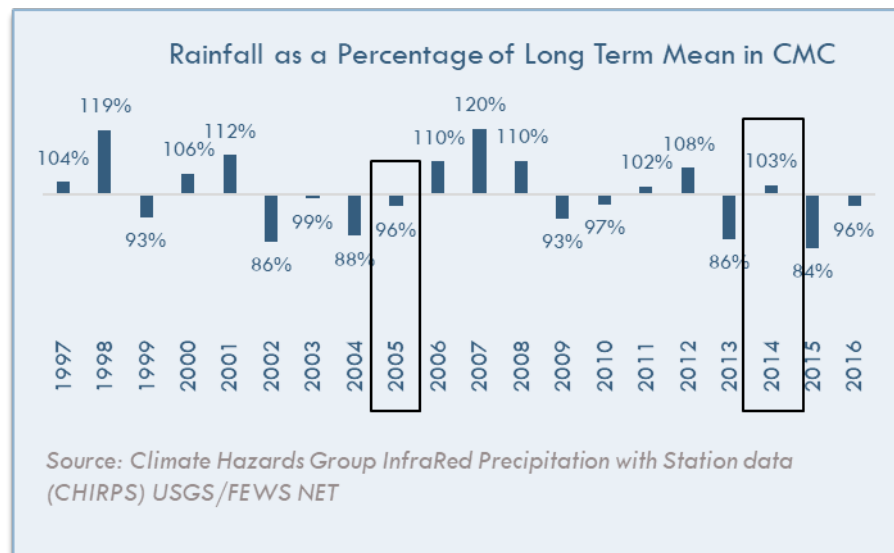
# Increasing off-farm diversification in Tigray

## Central Mixed Crop (CMC) Livelihood Zone: Tigray, Ethiopia



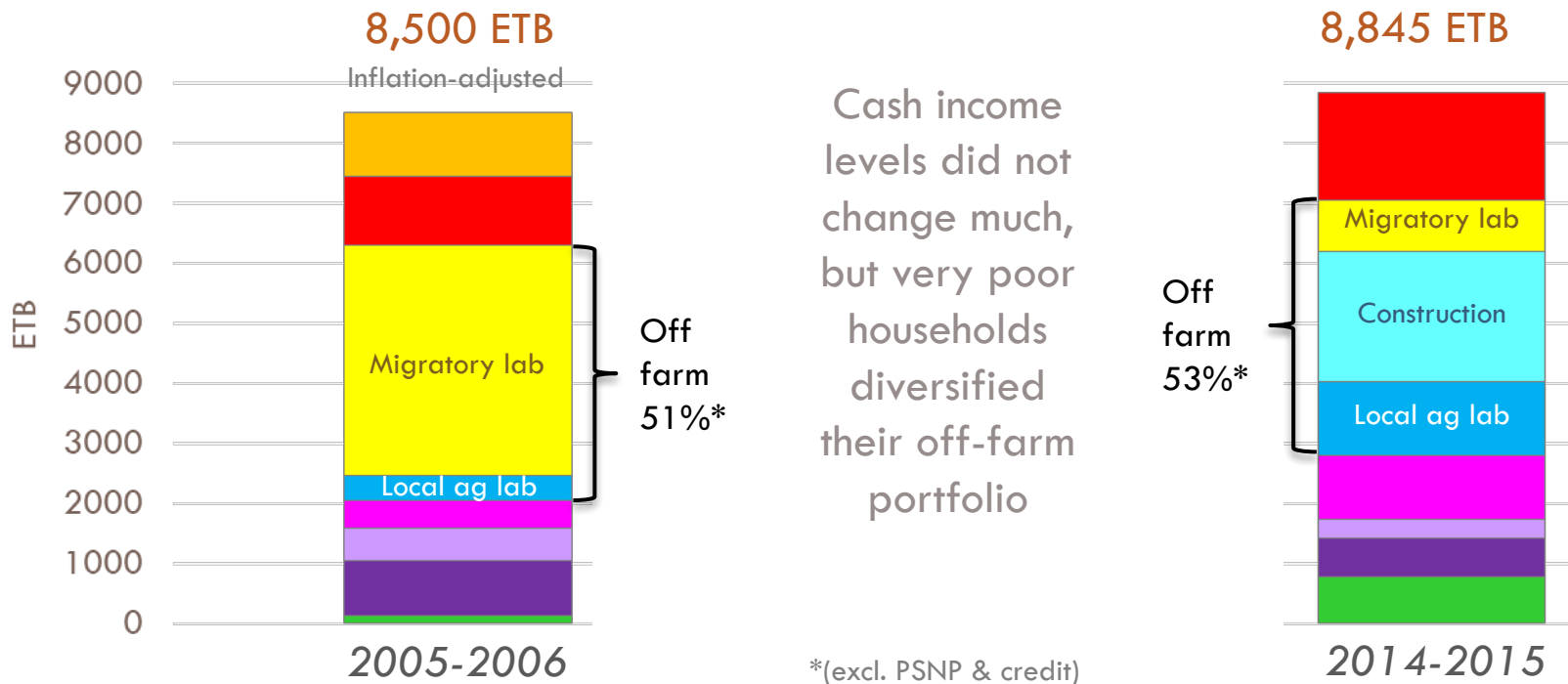
The two reference years for CMC were **2005-2006** & **2014-2015**

Both were relatively good years and rainfall conditions were generally comparable.



# Increasing off-farm diversification in Tigray

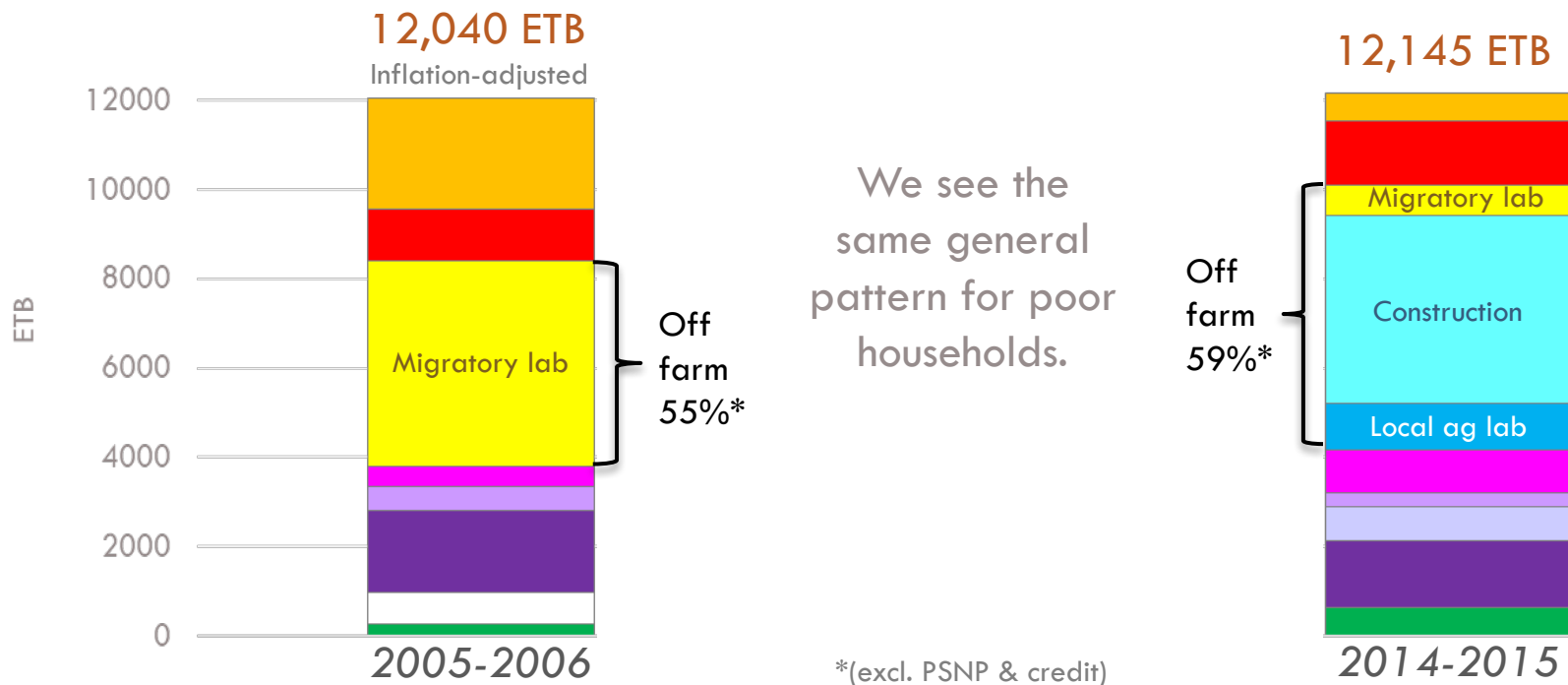
## Sources of Cash: **Very Poor** Households in CMC



List of cash sources	teff	goat sales	chicken sales
	egg sales	local ag labor	construction
	labor migration	PSNP	credit

# Increasing off-farm diversification in Tigray

## Sources of Cash: **Poor** Households in CMC



List of cash sources	■	teff	□	milk/butter	■	goat sales	■	sheep sales
	■	chicken sales	■	egg sales	■	local ag labor	■	construction
	■	labor migration	■	PSNP	■	credit		



# Increasing off-farm diversification in Tigray

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Both very poor and poor households in CMC diversified off-farm income over the past decade.

Did this make them more resilient in the face of a drought?

# Increasing off-farm diversification in Tigray

We used HEA Outcome Analysis to model the effects of a typical drought scenario on very poor households in both time periods



## Production problem specification

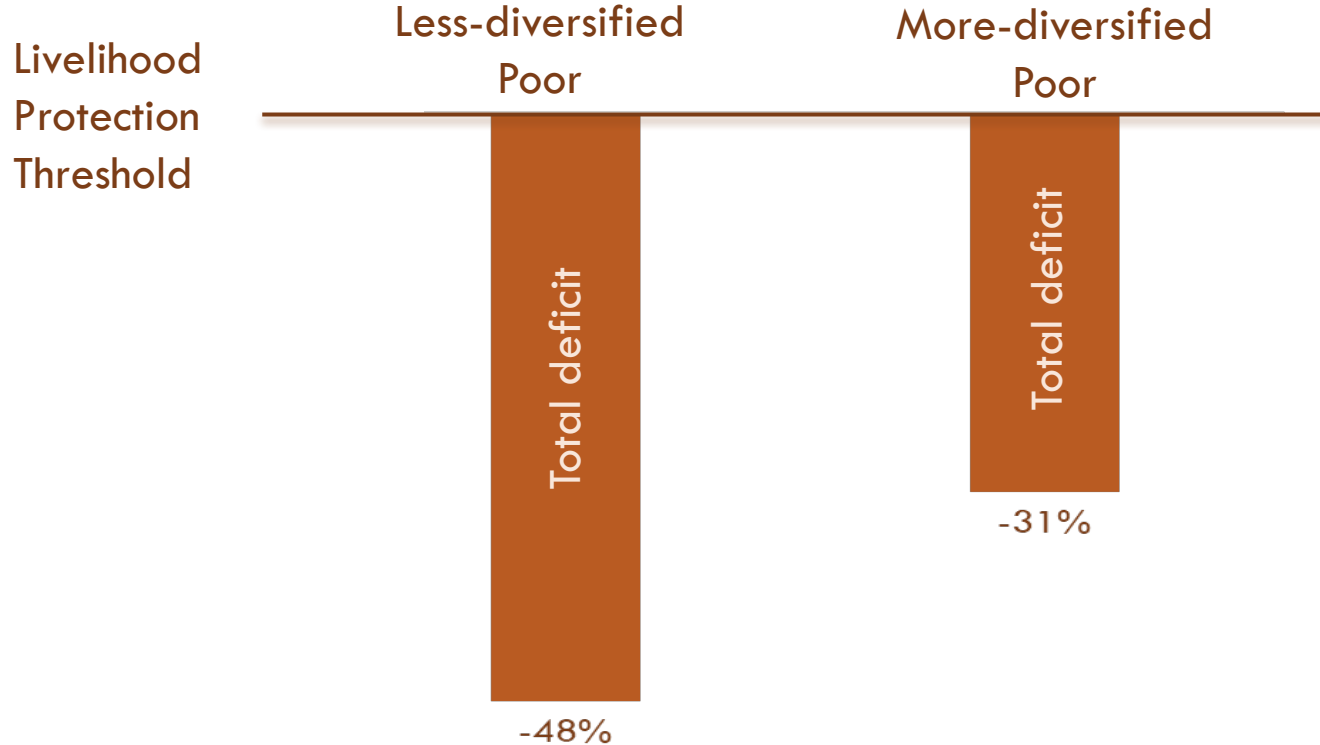
- 50% of ref. year production for maize
- 60% of ref. year production for sorghum/millet/*teff*/barley/pulses

## Market problem specification

- 150% increase in food prices
- 75% drop in livestock prices
- 60% of harvest labor wages
- 90% of migratory labor
- 90% of construction labor

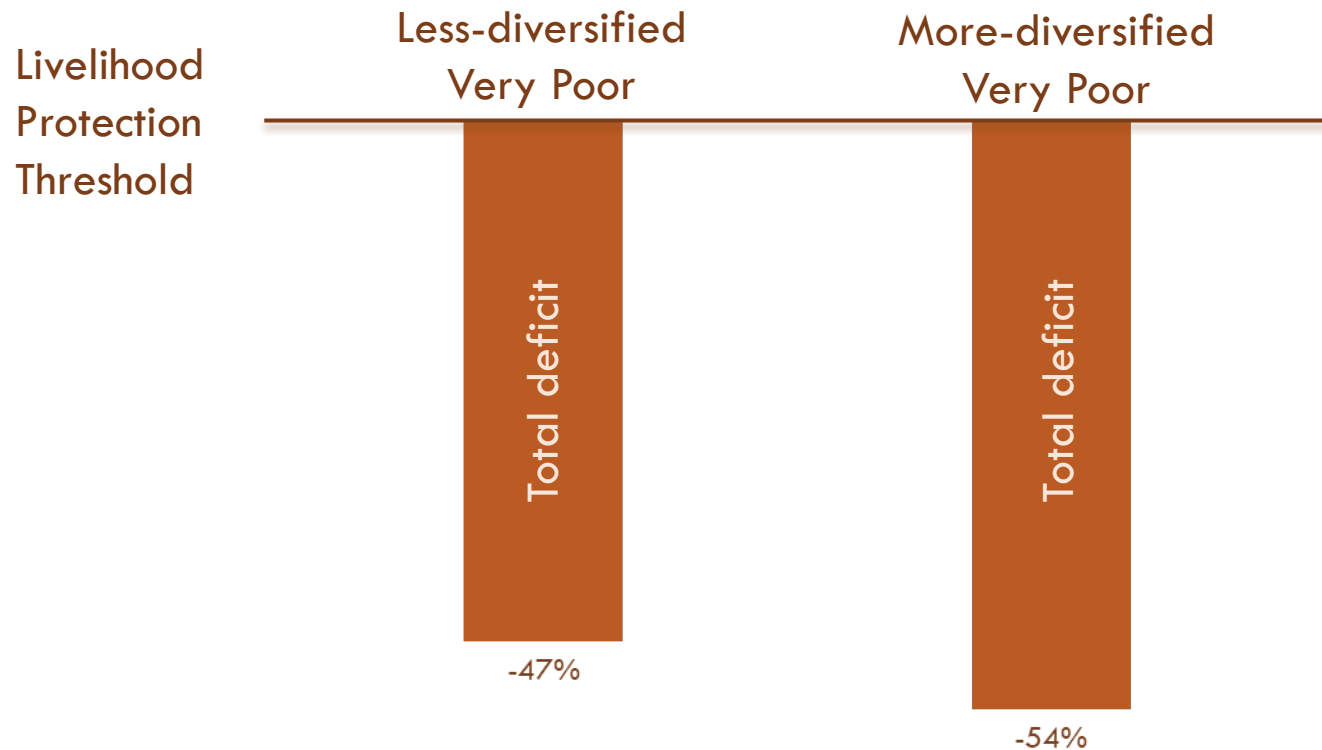
# Off-farm diversification in Tigray increases resilience for poor households....


## Results of Drought Analysis



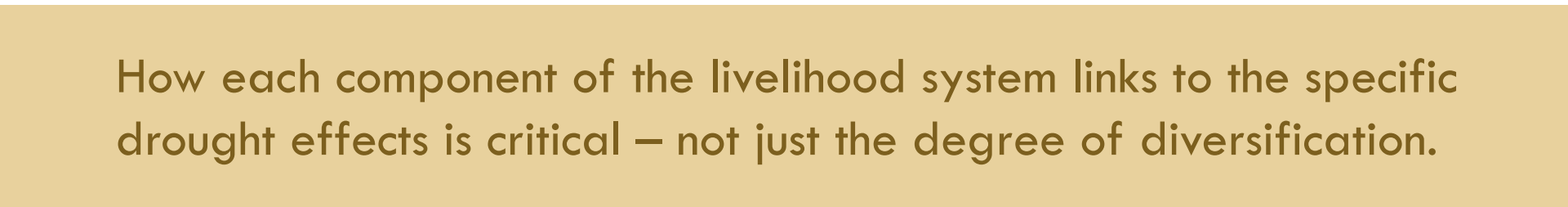
# ...but not for very poor households

## Results of Drought Analysis





The ‘resilience effect’ of diversification varies by wealth group and it varies from livelihood zone to livelihood zone.



How each component of the livelihood system links to the specific drought effects is critical – not just the degree of diversification.

# Conclusions

Mapping the demand side of the off-farm equation is critical.

The costs (immediate and hidden) associated with off-farm diversification need to be factored in.

Understanding the links between households within a community helps us leverage existing relationships to build resilience.

The 'resilience effect' of diversification will vary by wealth group and livelihood zone.

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Thank you

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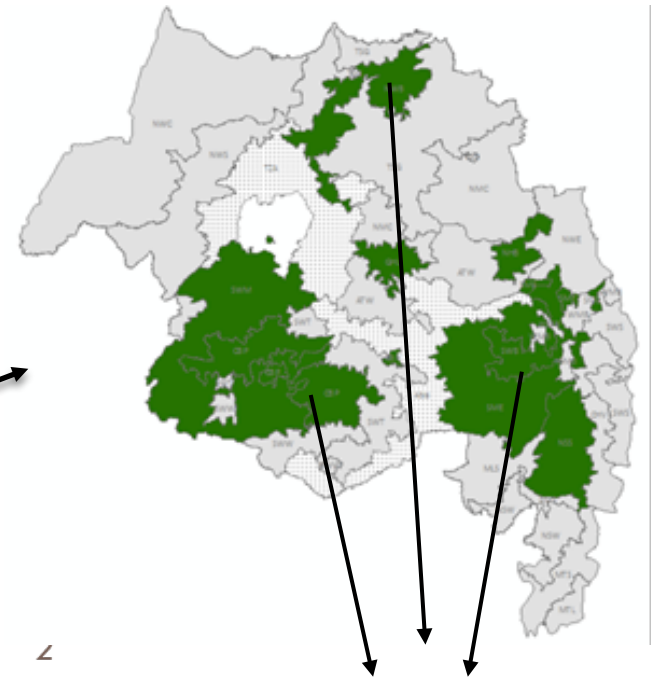
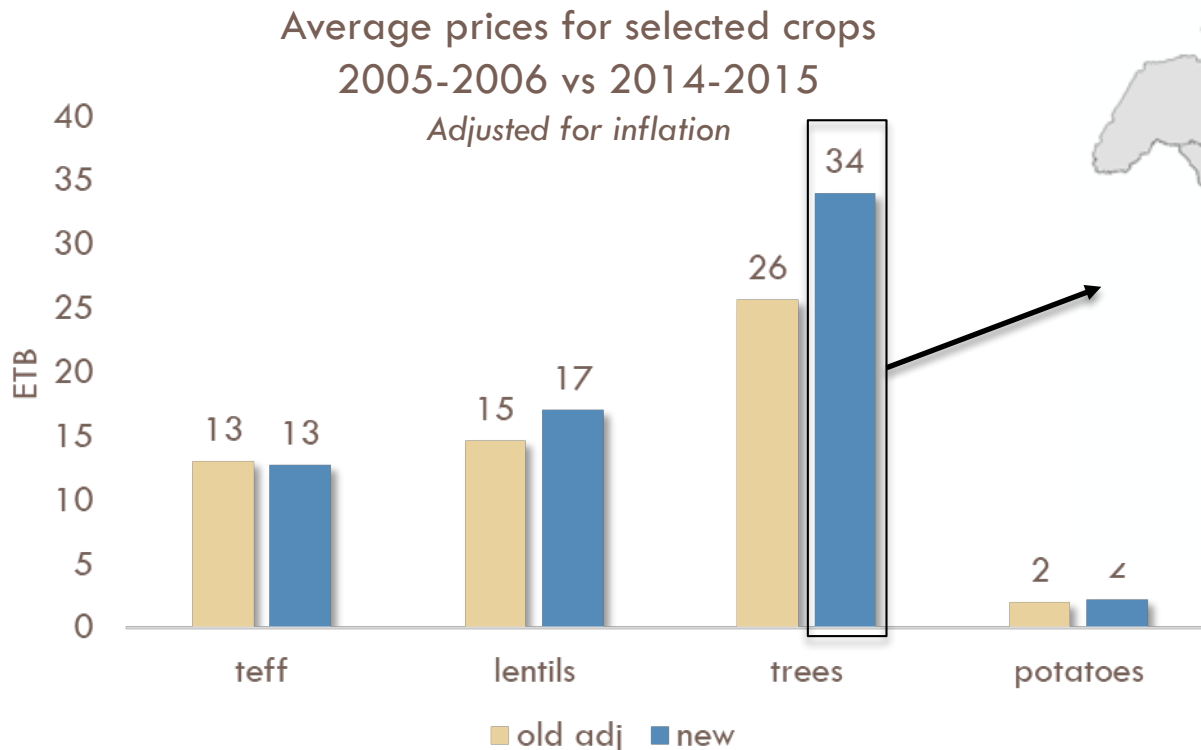
Extra slides



# Changing urban demand helps determine the logic of intensifying on-farm activities.

Intensification of on-farm income (tree cultivation) has been a smart move in many areas of Tigray.

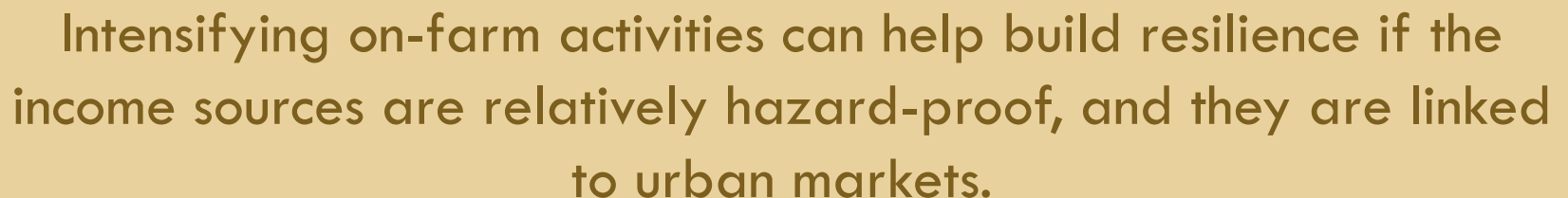
Areas in Amhara where sales of poles from eucalyptus trees now generates the highest crop-related cash income.



Sold to Addis Ababa and growing regional towns.



The link between urban demand and rural households is critical for building resilience.



Intensifying on-farm activities can help build resilience if the income sources are relatively hazard-proof, and they are linked to urban markets.