



NATIONAL BUREAU OF STATISTICS



The World Bank

# CONFLICT IN NIGERIA AND FOOD INSECURITY IN CONFLICT AFFECTED AREAS

A phone-based recall  
survey covering North East,  
North Central, and South  
South Nigeria 2010-2017

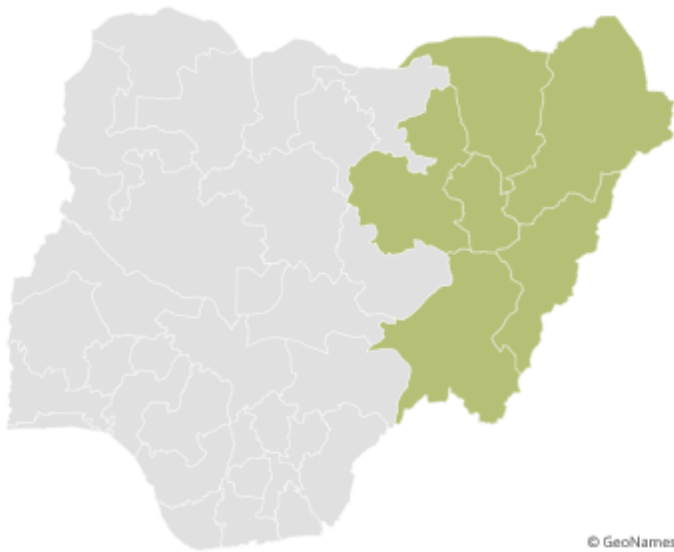
Collaborative survey  
between National Bureau  
of Statistics and The World  
Bank

# Introduction

- In NBS' attempt to produce and disseminate more information to guide the work of our government and policy makers, we have continued to explore new ways of collecting better quality information from respondents, particularly given the changing nature of our society which is being driven by developments in technology.
- One of the ways we have identified is the use of Mobile Telephones to collect information from respondents, particularly in difficult to reach areas, with medium to high telephone density. NBS is accordingly expanding its data collection capabilities by establishing a fully functional call centre at its Head Quarters in Abuja modelled after the Listening to Africa Program of the World Bank so as to collect simple but rapidly required information across the country
- The results being showcased in this presentation are the result of a Pilot exercise conducted in the North East, North Central and South-South Geo-political zones on Conflict and Food Insecurity using this new approach to data collection.
- The objective of this pilot was to test the viability of the new approach to collecting data in Nigeria, but also to examine the nature of conflicts in Nigeria and gain an understanding of the ways in which households living within those conflict-affected areas cope and respond to these events.

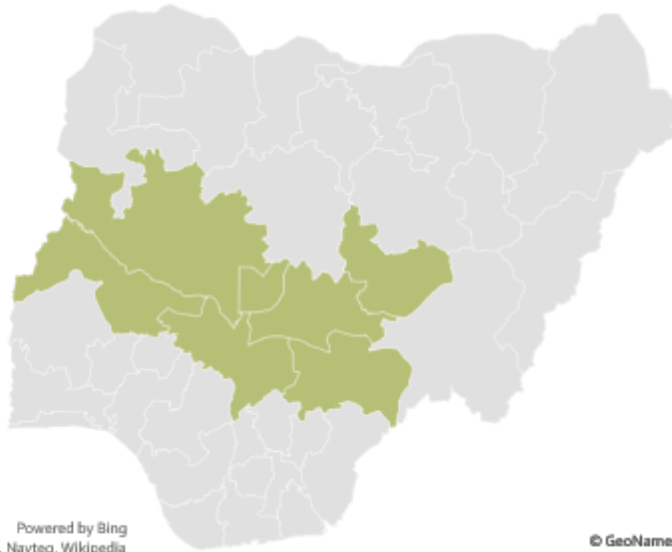
# Background

## North East



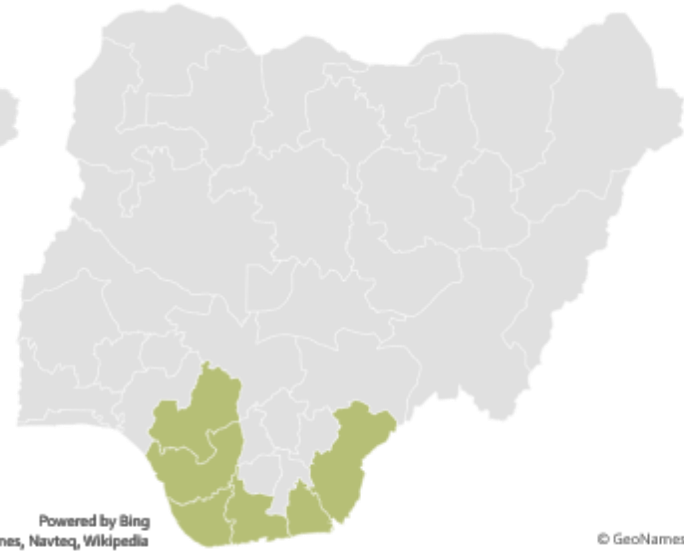
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## North Central



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## South South



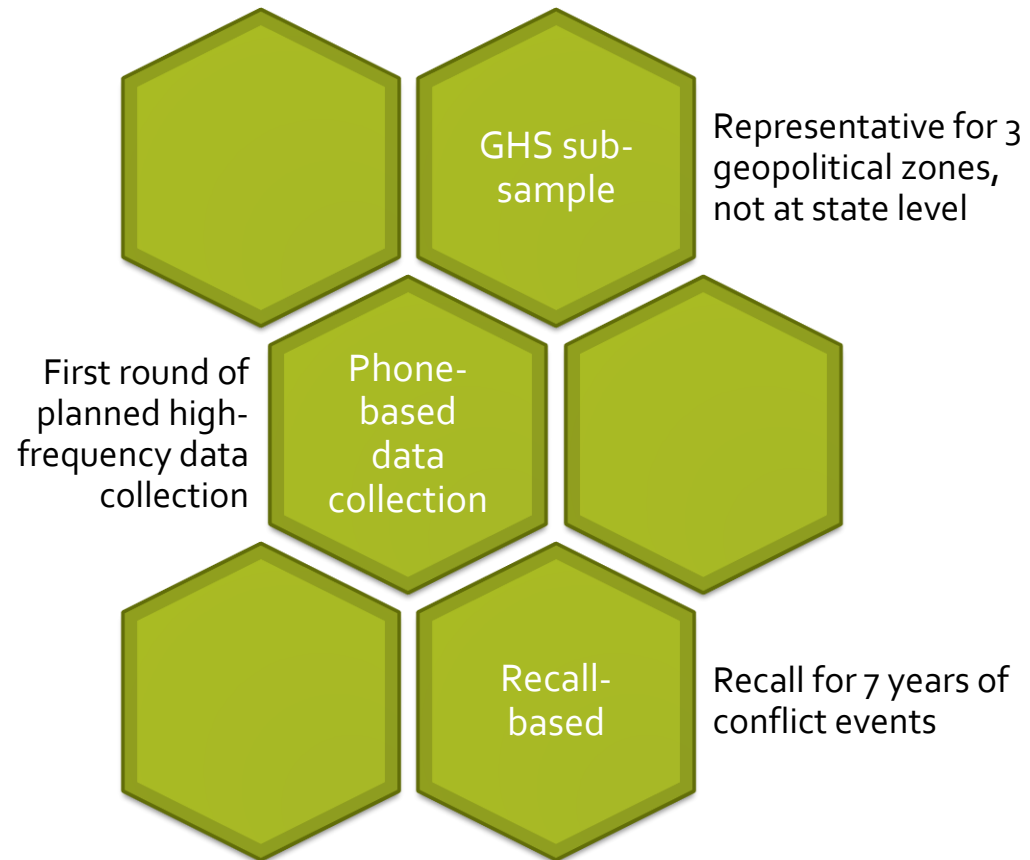
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- Intense Boko Haram activity
- Gained international attention and response

- Growing farmer-herder conflict with national attention
- Some terrorist activity
- Linked to climate change

- Oil-rich region home to economically motivated crime and violence
- Militants and pirates often blamed for conflict

# Research Design



# Data

## Key Indicators

- Type of conflict event
- Year of event
- Cause and perpetrator
- Consequences
- Event reporting

## Household and Community Level

- Household Level
  - HH level events happened to a member of the same household as the person reporting.
  - Can assume these are unique events as 1 person per household was surveyed
- Community Level
  - Community level events happened to a member of the same community as the person reporting
  - We cannot assume these are unique events, instead they inform how many people may deal with repercussions

# Limitations

## Recall Bias

- Events that took place long ago less likely to be reported, more severe events more likely to be reported

## Sampling Bias

- GHS panel means mobile or nomadic households are under-represented

## Gender and Power Dynamics

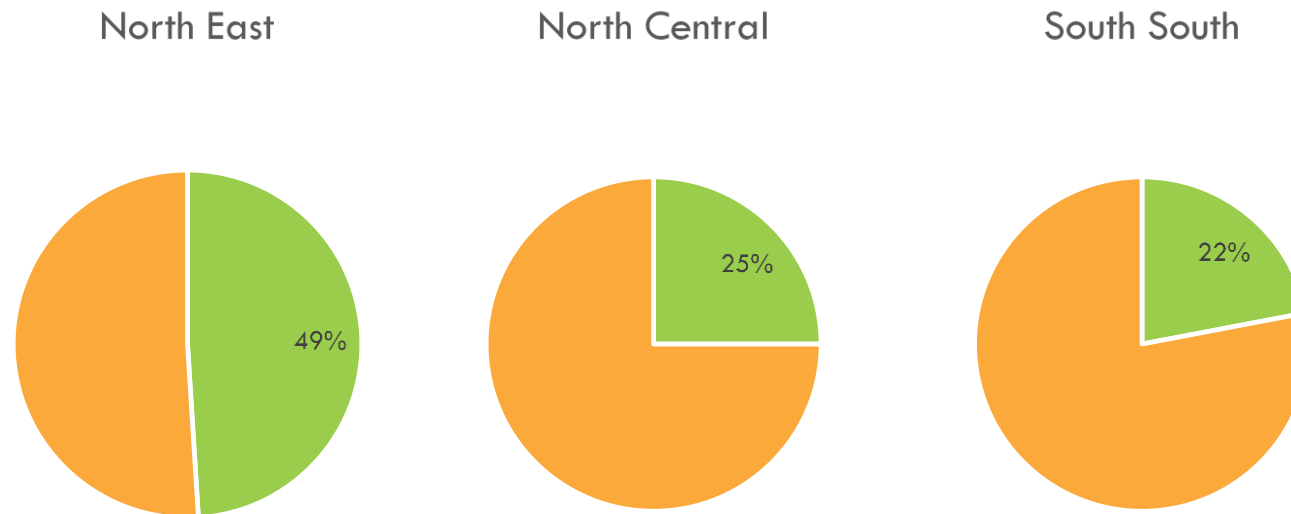
- Reporting was done by male heads of household with access to mobile phones – little reporting of crimes against women

# RESULTS

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# Prevalence of Conflict

Proportion of households with any member affected by a conflict event, Nigeria 2010-2017

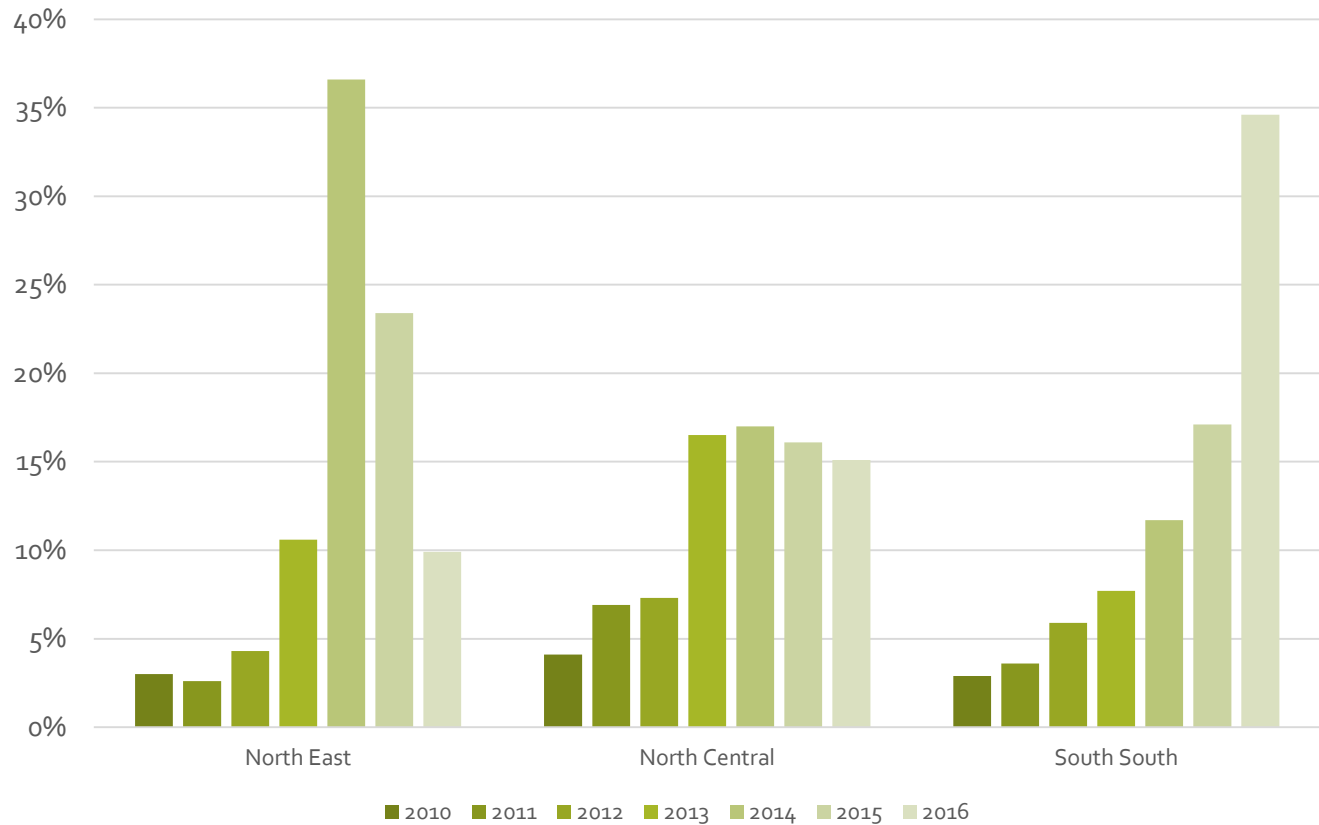


Average number of events per conflict-affected household		
3.4	3.1	2.5



# Affected households over time

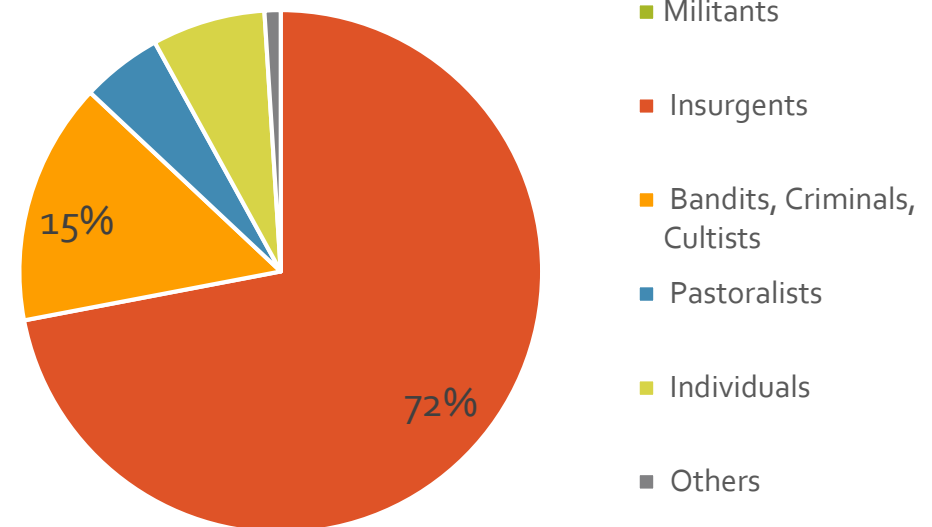
Conflict events over time by zone, Nigeria 2010-2016



# North East Nigeria

	North East	
	Households (%)	Community members (%)
Percent experiencing any conflict event	49%	72%
<b>Type of Event (Household/Community member ... since 2010)</b>		
Killed	7.0%	34.0%
Physically attacked	5.0%	18.0%
Injured	5.4%	19.0%
Suffered sexual violence	0.0%	6.0%
Forced to work	0.9%	1.2%
Abducted	0.0%	7.2%
Robbed	12.0%	30.0%
Displaced	27.0%	30.0%
Dwelling robbed	22.0%	32.0%
Dwelling damaged	5.6%	20.0%
Land occupied	5.6%	9.7%
Assets destroyed	3.6%	11.0%
School access blocked	21.0%	26.0%
Health service access blocked	6.6%	11.0%

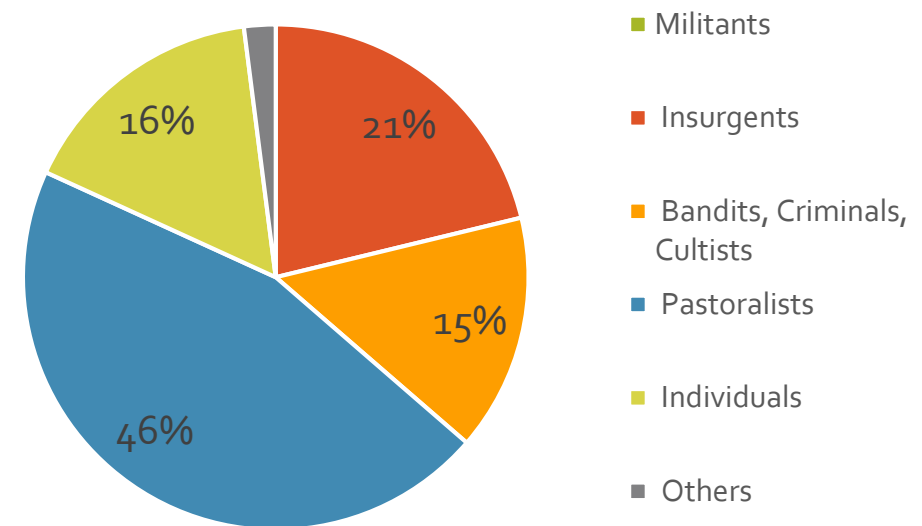
Perpetrator of conflict events affecting household members, North East Nigeria  
2010-2017



# North Central Nigeria

	North Central	
	Households (%)	Community members (%)
Percent experiencing any conflict event	25%	47%
<b>Type of Event (Household/Community member ... since 2010)</b>		
Killed	2.5%	15.0%
Physically attacked	2.8%	12.0%
Injured	1.5%	14.0%
Suffered sexual violence	0.0%	3.0%
Forced to work	0.0%	0.2%
Abducted	0.6%	8.0%
Robbed	6.0%	17.0%
Displaced	8.1%	7.0%
Dwelling robbed	5.5%	14.0%
Dwelling damaged	6.2%	9.7%
Land occupied	4.8%	9.1%
Assets destroyed	7.9%	10.0%
School access blocked	6.0%	7.2%
Health service access blocked	0.9%	1.4%

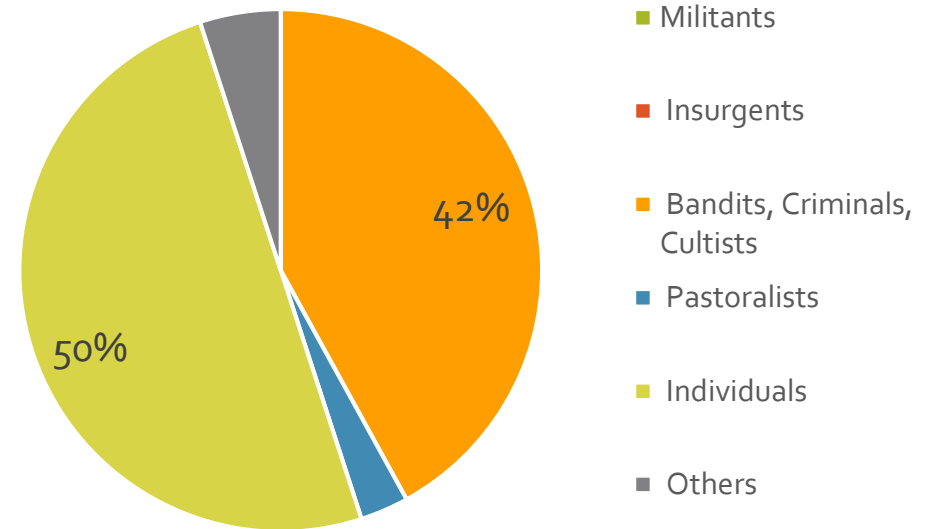
Perpetrator of conflict events affecting household members, North Central Nigeria 2010-2017

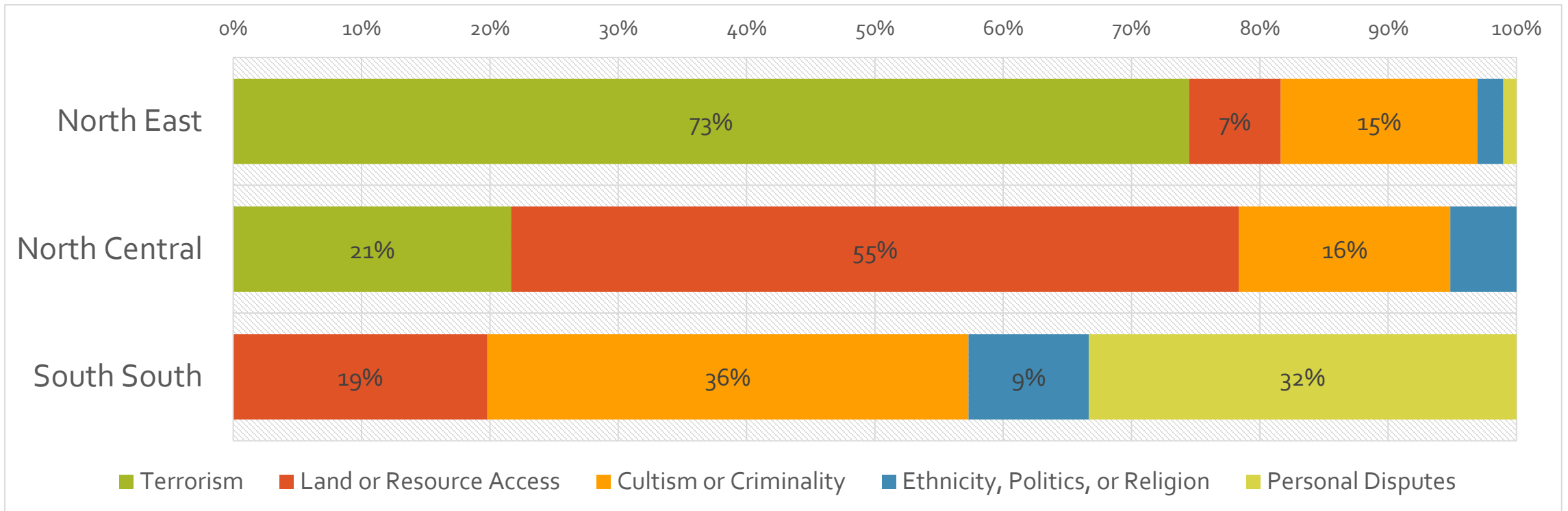


# South South Nigeria

	South South	
	Households (%)	Community members (%)
Percent experiencing any conflict event	22%	49%
Type of Event (Household/Community member ... since 2010)		
<b>Killed</b>	4.8%	24.0%
Physically attacked	3.5%	13.0%
Injured	3.0%	12.0%
Suffered sexual violence	0.0%	3.6%
Forced to work	0.0%	0.0%
Abducted	1.1%	13.0%
Robbed	2.4%	13.0%
Displaced	5.7%	11.0%
Dwelling robbed	6.4%	25.0%
Dwelling damaged	4.6%	11.0%
Land occupied	1.6%	6.3%
Assets destroyed	4.2%	7.0%
School access blocked	6.0%	8.4%
Health service access blocked	0.0%	1.1%

Perpetrator of conflict events affecting household members, South South Nigeria  
2010-2017

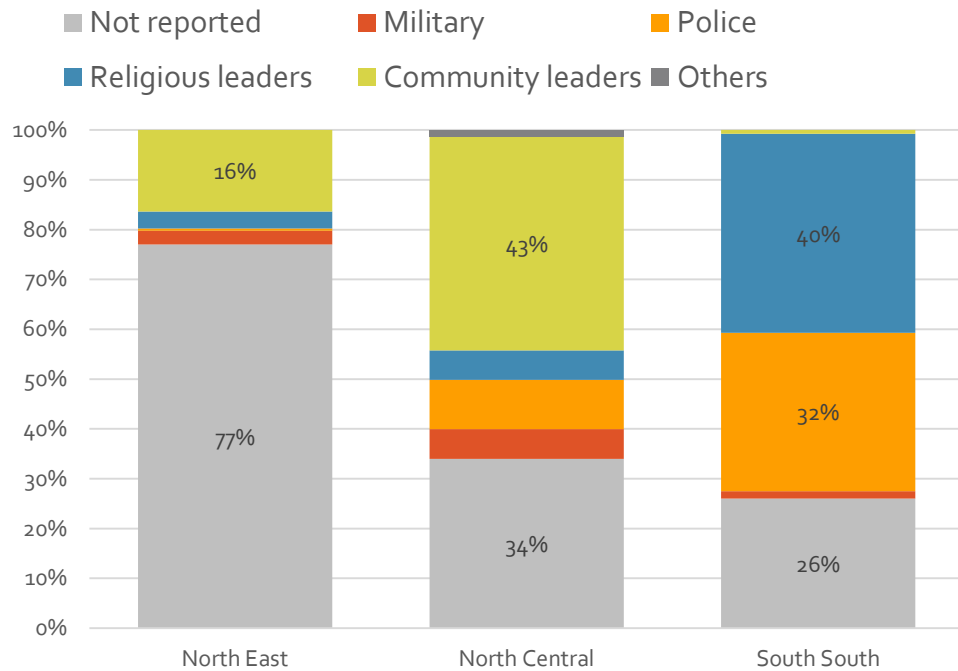




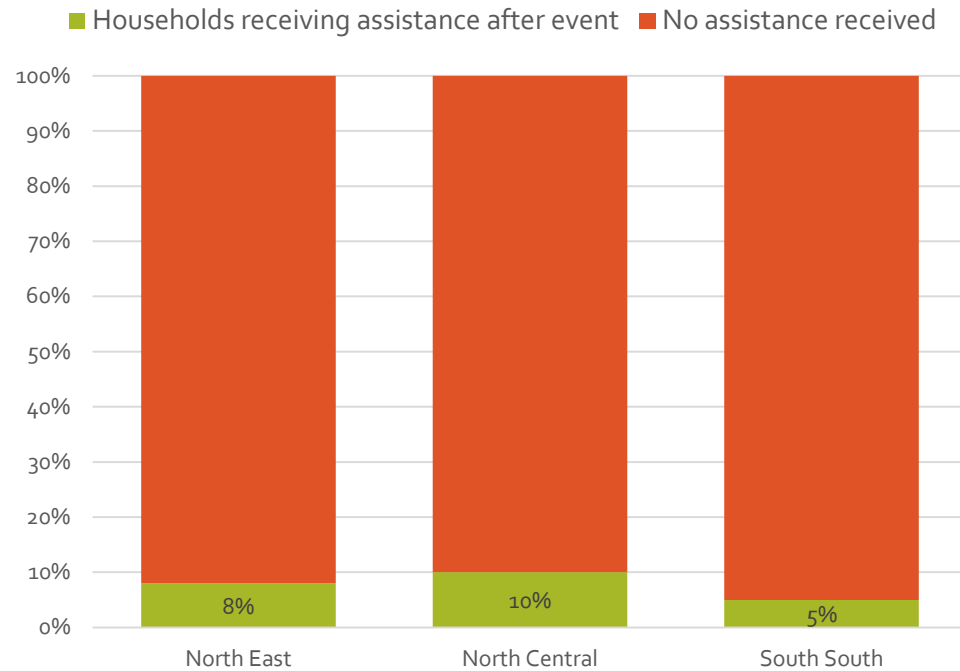
# Primary Cause of Conflict Events, by zone 2010-2017

# Follow-up on conflict events

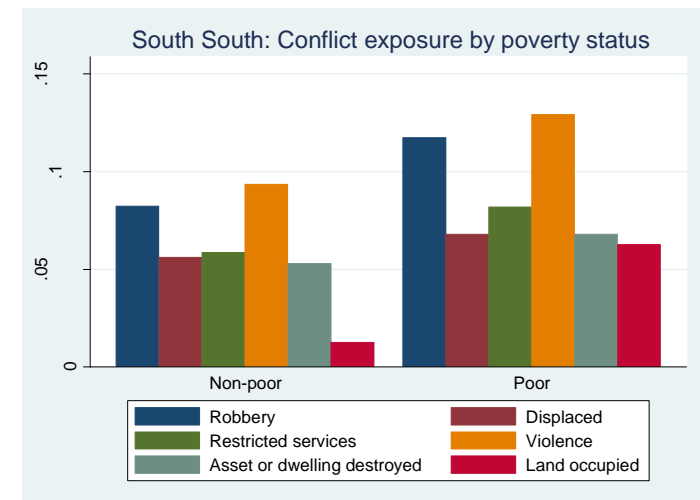
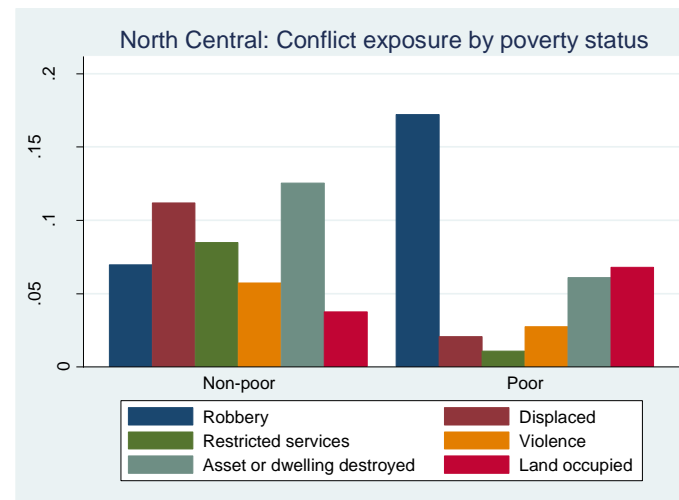
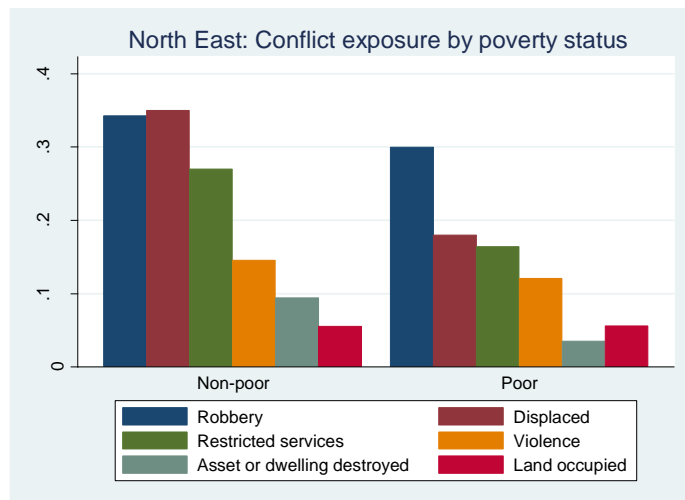
## Reporting of Conflict Events



## Assistance after event



# Complex relationship between conflict and poverty



## Proportion of Conflict Events Occurring per Year; North East, North Central, and South-South Nigeria 2010-2017

	North East		North Central		South South	
	Household level	Community level	Household level	Community level	Household level	Community level
<b>2010</b>	3.0%	4.1%	4.1%	3.9%	2.9%	2.5%
<b>2011</b>	2.6%	3.8%	6.9%	6.4%	3.6%	0.6%
<b>2012</b>	4.3%	8.1%	7.3%	7.9%	5.9%	4.3%
<b>2013</b>	10.6%	10.3%	16.5%	12.1%	7.7%	4.9%
<b>2014</b>	36.6%	28.9%	17.0%	17.2%	11.7%	7.4%
<b>2015</b>	23.4%	22.3%	16.1%	17.2%	17.1%	9.9%
<b>2016</b>	9.9%	12.9%	15.1%	21.3%	34.6%	45.1%
<b>2017</b>	9.6%	9.6%	17.0%	14.0%	16.5%	25.3%



**Percentage of Households Affected by conflict events targeting members of their household and members of their community; North East, North Central, and South-South Nigeria 2010-2017**

	North East		North Central		South South	
	Households (%)	Community members (%)	Households (%)	Community members (%)	Households (%)	Community members (%)
Percent experiencing any conflict event	49%	72%	25%	47%	22%	49%
Type of Event (Household/Community member ... since 2010)						
Killed	7.0%	34.0%	2.5%	15.0%	4.8%	24.0%
Physically attacked	5.0%	18.0%	2.8%	12.0%	3.5%	13.0%
Injured	5.4%	19.0%	1.5%	14.0%	3.0%	12.0%
Suffered sexual violence	0.0%	6.0%	0.0%	3.0%	0.0%	3.6%
Forced to work	0.9%	1.2%	0.0%	0.2%	0.0%	0.0%
Abducted	0.0%	7.2%	0.6%	8.0%	1.1%	13.0%
Robbed	12.0%	30.0%	6.0%	17.0%	2.4%	13.0%
Displaced	27.0%	30.0%	8.1%	7.0%	5.7%	11.0%
Dwelling robbed	22.0%	32.0%	5.5%	14.0%	6.4%	25.0%
Dwelling damaged	5.6%	20.0%	6.2%	9.7%	4.6%	11.0%
Land occupied	5.6%	9.7%	4.8%	9.1%	1.6%	6.3%
Assets destroyed	3.6%	11.0%	7.9%	10.0%	4.2%	7.0%
School access blocked	21.0%	26.0%	6.0%	7.2%	6.0%	8.4%
Health service access blocked	6.6%	11.0%	0.9%	1.4%	0.0%	1.1%

## Causes, perpetrators, and consequences of conflict events in North East, North Central, and South-South Nigeria 2010-2017

	North East		North Central		South South	
	Household events (%)	Community events (%)	Household events (%)	Community events (%)	Household events (%)	Community events (%)
<b>Cause of household event</b>						
Terrorism	73%	62%	21%	14%	0%	0%
Land or Resource Access	7%	9%	55%	39%	19%	17%
Cultism or Criminality	15%	16%	16%	29%	36%	45%
Ethnicity, Politics, or Religion	2%	5%	5%	6%	9%	14%
Personal Disputes	1%	2%	0%	3%	32%	20%
Others	1%	6%	3%	9%	5%	4%
<b>Perpetrator of the event</b>						
Militants	0%	0%	0%	0%	0%	1%
Insurgents	72%	62%	21%	12%	0%	0%
Bandits, Criminals, Cultists	15%	17%	15%	33%	42%	45%
Pastoralists	5%	8%	45%	35%	3%	2%
Individuals	7%	10%	16%	13%	50%	42%
Others	1%	3%	2%	6%	5%	10%
<b>Main consequence of the event</b>						
Lost household member	7%	-	6%	-	13%	-
Displaced or migrated	26%	-	33%	-	37%	-
Lost assets	5%	-	3%	-	11%	-
Lost economic opportunity	28%	-	29%	-	16%	-
Sold property	1%	-	0%	-	1%	-
Borrowed money	2%	-	0%	-	2%	-
Reduced consumption	3%	-	4%	-	2%	-
Faced additional costs	12%	-	13%	-	7%	-
Children sent away or out of school	16%	-	11%	-	11%	-
<b>Event reported</b>	<b>23%</b>	<b>-</b>	<b>66%</b>	<b>-</b>	<b>74%</b>	<b>-</b>
<b>Authority event was reported to (of events reported)</b>						
Military	12%	-	9%	-	2%	-
Police	2%	-	15%	-	43%	-
Religious leaders	15%	-	9%	-	54%	-
Community leaders	71%	-	65%	-	1%	-
Others	0%	-	2%	-	0%	-
<b>Households receiving assistance after event</b>	<b>8%</b>	<b>-</b>	<b>10%</b>	<b>-</b>	<b>5%</b>	<b>-</b>

<sup>[1]</sup> Terrorism is generally attributable to Boko Haram activities, and was recorded as “militant/terrorist activity” or “insurgency activity” during data collection

<sup>[2]</sup> Land or resource access refers to the responses “livestock grazing on farm,” “land disputes,” and “access to natural resources.”

# Policy Lessons

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Overall **incidence of conflict is higher in 2016** as compared to 2010

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Many conflict events are never reported to authorities; **engaging community and religious leaders in surveillance may improve rates of reporting** events and improve overall understanding of the changing context of conflict and violence across Nigeria

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Only a small minority of conflict-affected households receive any type of assistance in support of their recovery – increased reporting and **a stronger response system may aid in post-conflict rehabilitation**

# Research Lessons

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Sustained conflict is known to be both caused by and contribute to poverty; however, according to our findings **wealth does not protect households from exposure to conflict and violence** in the surveyed areas of Nigeria

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**Phone-based data collection can improve understanding** of conflict and violence, especially in areas where insecurity prevents face-to-face access to community members

# FOOD INSECURITY IN CONFLICT AFFECTED REGIONS IN NIGERIA

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Results from the North East, North Central, and South South zones

# Data: 2<sup>nd</sup> round of a telephone survey

- The two telephone surveys were conducted among a sub-sample of GHS panel households
- Two rounds of telephone survey in 3 conflict affected areas
  - 1<sup>st</sup> round on conflict exposure: recall questions 2010-Spring 2017 (n=717)
  - **2<sup>nd</sup> round in August-September 2017**
  - **Sample size 582: North East n=147, North Central n=219, South South n=216**
  - focused on food security, market access
  - Some basic indicators of income sources and asset ownership

# Demographic characteristics

	<b>North East</b>	<b>North Central</b>	<b>South South</b>
<b>Female household head</b>	10%	17%	<b>24%</b>
<b>Ever attended school household head</b>	57%	67%	<b>89%</b>
<b>Main income source: self-employed on farm</b>	<b>50%</b>	43%	33%
<b>Household receives remittances</b>	8.2%	<b>21%</b>	13%

# Food insecurity definition

- *“**Food security** exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern. **Food insecurity** exists when people do not have adequate physical, social or economic access to food as defined above.” (FAO, 2003)*
- Food insecurity can be **chronic** (persistent poverty) or **transitory** (due to shocks, such as conflict)
- This report: **The CSI index (Coping strategies index)**
  - An emergency measure of food security, based on behavior (not consumption or nutritional intake)



# The coping strategies index (CSI index)

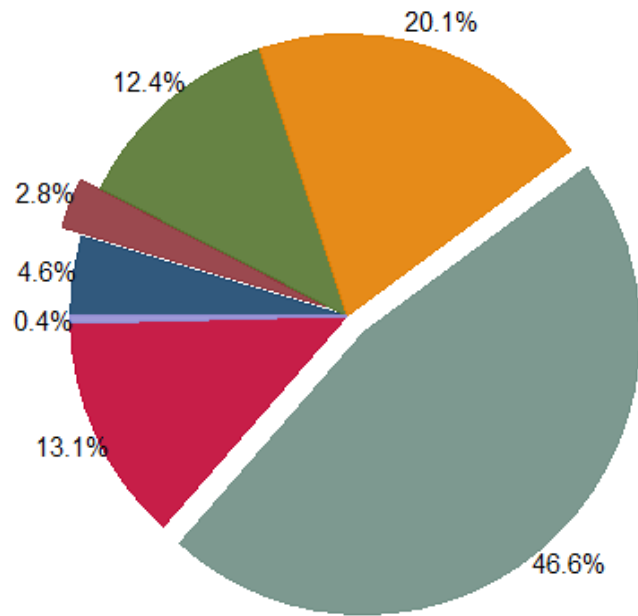
- The Basic Logic: *“What do you do when you don’t have enough food, and don’t have enough money to buy food?”*
- 5 recall questions (last 7 days) on coping strategies
  - example: *“In the past 7 days, how many days did your household have to borrow food, or rely on help from a friend or relative?”*
- Takes values 0-56, threshold of “high food insecurity” is 10

The average household in each region is highly food insecure

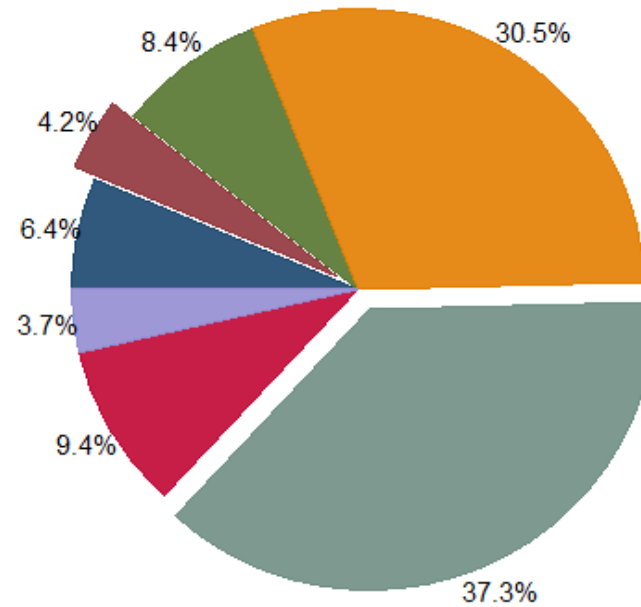
	North East	North Central	South South
Mean of Coping Strategy Index (CSI Score)	15	13	13

# Reducing meals / portion size most common coping strategy

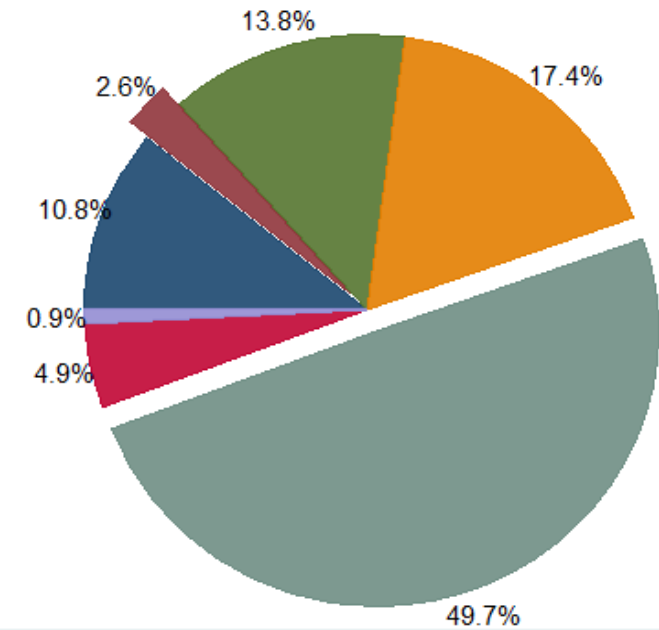
North East



North Central



South South



# Food prices a main concern in all regions

- Most households rely on the market as the main source of food  
→ NE 88%, NC 85% and SS 92%
- Most households consider there is “plenty of food available at the market”  
→ NE 97% , NC and SS 89%
- Price increases are the largest challenge in getting food from the market  
→ NE 63%, NC 66% and SS 52%
- Lower agricultural production reported than last season reported by: NE 22 % NC 19 and SS 20% of farming households.
- In the North East and North Central **input prices** are reported as the main reason for the decline.

# FOOD INSECURITY AND CONFLICT

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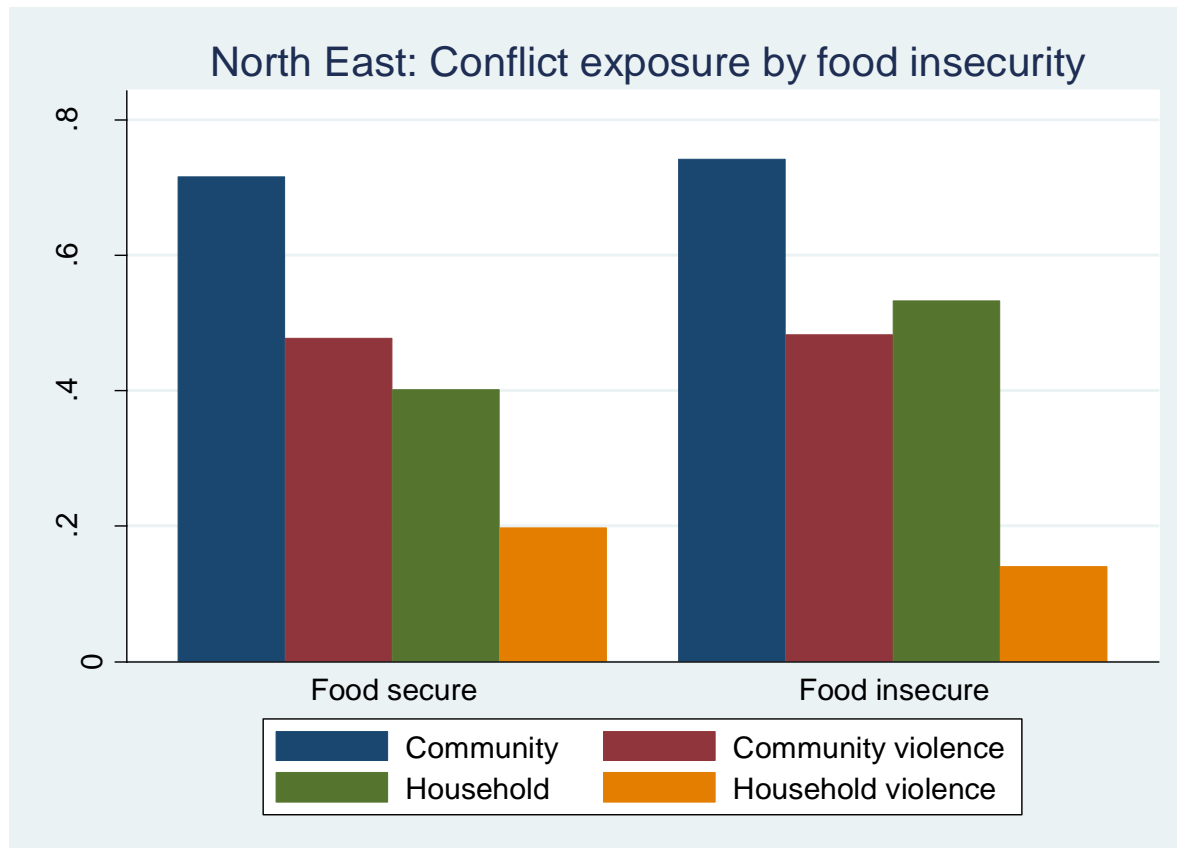
Household is **Food insecure** if answered YES to:  
“In the past 7 days, were there times when you did not have enough food or money to buy food?”

## **Conflict definitions**

**Community:** any conflict event in community between 2010-Spring 2017

**Household:** any conflict event in household between 2010-Spring 2017

# North East: No statistically significant difference in conflict exposure between food secure and food insecure households

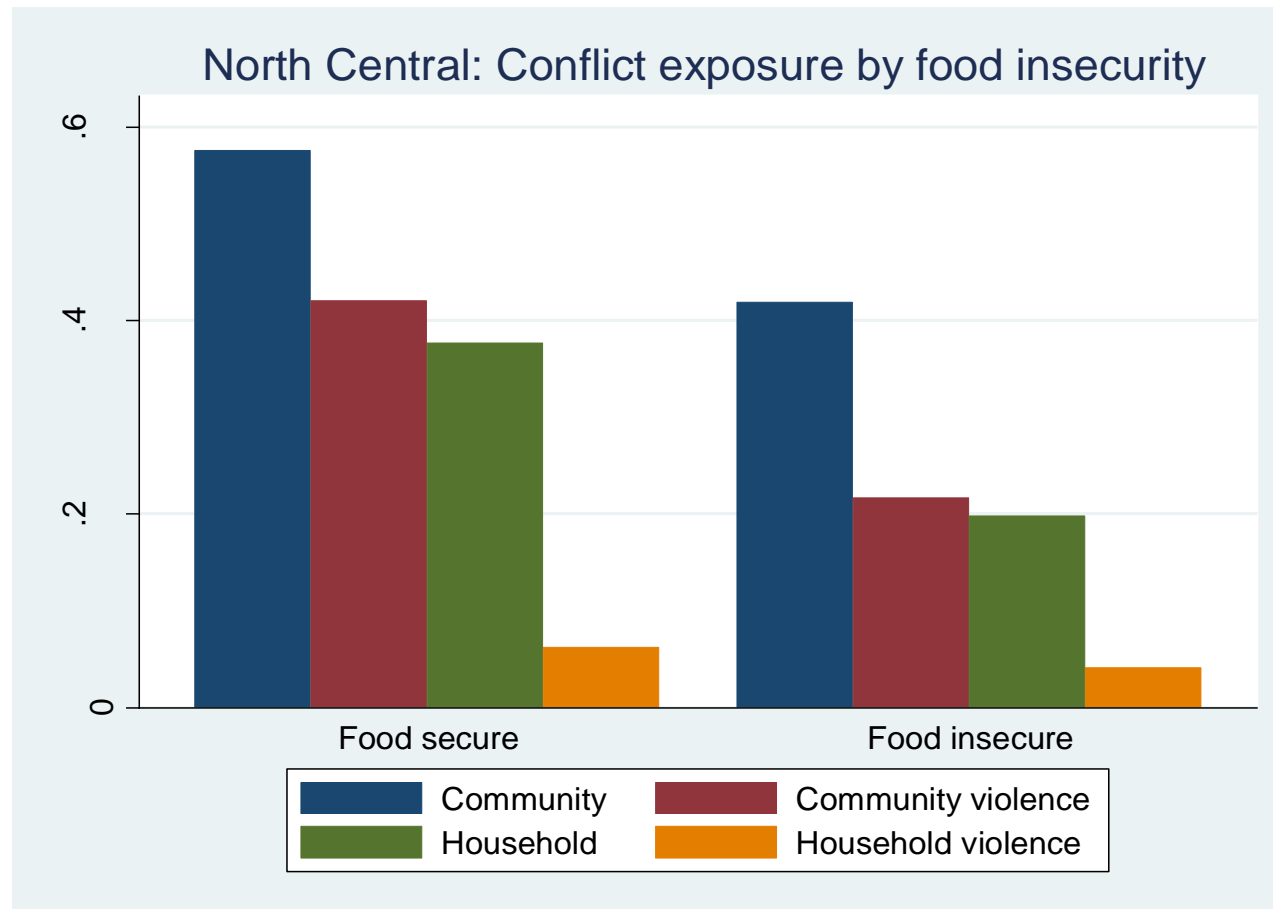


79% of households are food insecure

Interpretation of graph:

Of food insecure households 74% reported conflict events having taken place at the community compared to 72% of food secure households

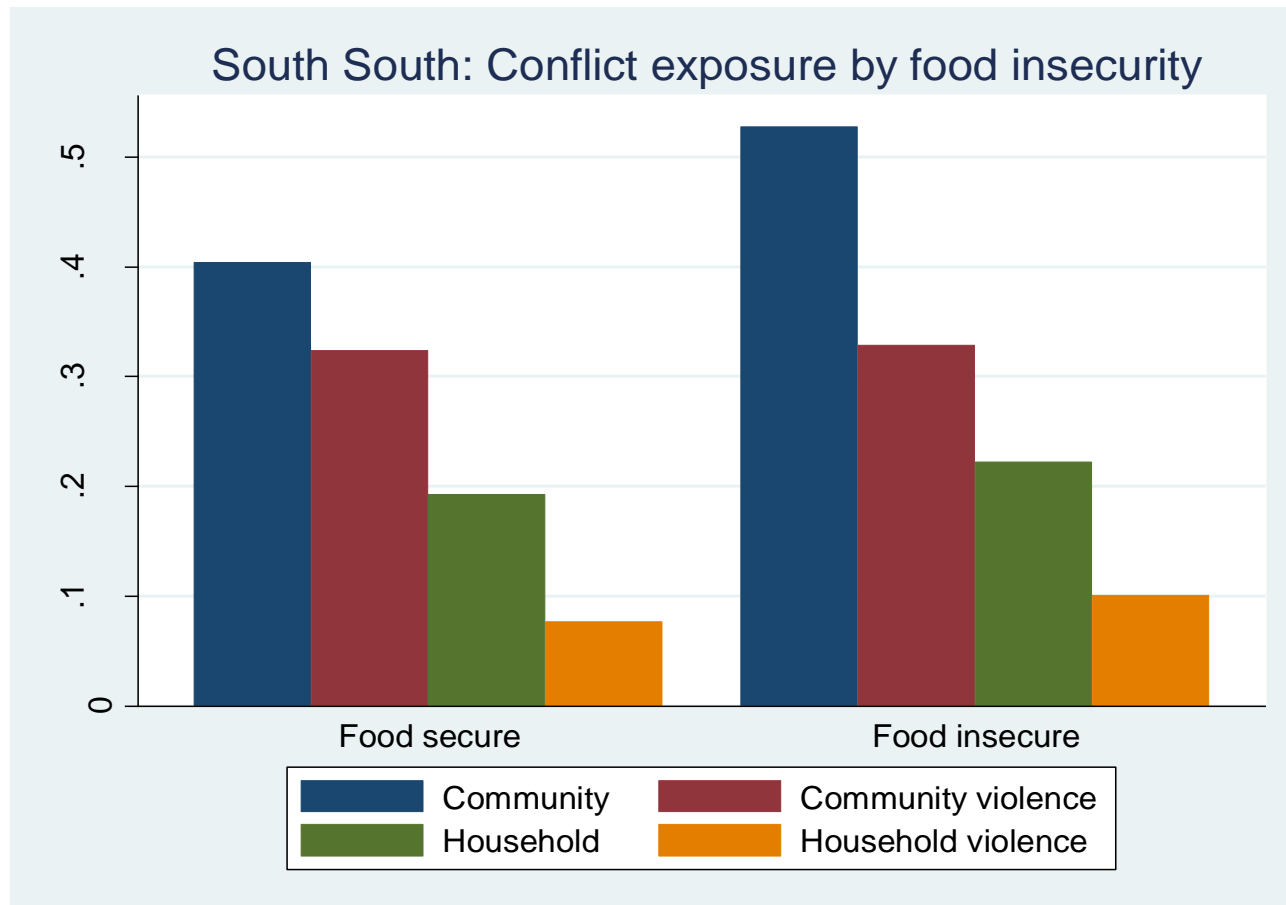
# North Central: Food secure households have been more affected by conflict, but differences not statistically significant



71% of households are food insecure

To illustrate, 58% of food secure households report there have been at least one conflict event in their community since 2010, compared to only 42% of food insecure households.

# South South: Small differences between food secure and insecure households in conflict exposure. Not statistically significant



74% of households are food insecure

22% of food insecure households have experienced at least one conflict event in household compared to 19% of food secure households.

# Household characteristics related to food insecurity partly similar and partly different across regions

- **In different contexts different type of household might be in the highest risk of becoming food insecure,** even when the nature of food insecurity is similar.
- Larger households generally have a higher risk of food insecurity in all regions
- In the North East and North Central, education matters more for food security.
- In the South South wage income is more strongly related to food security.
- Remittances are significant only in the North East, other factors held constant.
- Living in a urban area strongly related to food security only in the South South.



Means of key variables by Region	North East	North Central	South South
Female respondent	.11	.26	.23
Female household head	.1	.17	.24
Household size	11	7.2	6.7
Ever attended school household head*	.57	.67	.89
Ever attended school household head female*	.21	.49	.65
Ever attended school household head male*	.61	.71	.96
Education level completed household head**	1	1.3	1.4
Education level completed household head female**	.18	.91	.76
Education level completed household head male**	1.1	1.4	1.7
Number of years of education for household head*	5.8	7.3	8.6
Number of years of education household head female*	1.3	5.2	4.9
Number of years of education household head male*	6.3	7.8	9.7
Income source: wages	.23	.2	.24
Income source: self-employed (farm)	.5	.43	.33
Income source: self-employed (non-farm)	.19	.24	.3
Income source: pension	.032	.046	.025
Household receives remittances	.082	.21	.13
Main employment: farm (wages)	.069	.028	.026
Main employment: farm (self-employed)	.56	.48	.37
Main employment: non-farm (wage)	.21	.22	.26
Main employment: non-farm (self-employed)	.13	.22	.26
Main employment: livestock herding	.011	.0062	0
Employment changed (last 12 months)	.13	.079	.12
Household has any type of asset	.68	.6	.56
Household owns livestock	.54	.35	.19
Household owns vehicles	.2	.14	.13
Household owns property	.41	.35	.31
Household owns farm assets	.38	.36	.26
Household owns non-farm assets	.08	.076	.071
Livestock killed or stolen	.059	.18	.22
Market is the main source of food	.88	.85	.92
Distance to nearest market (minutes)	20	18	18
Distance to water (minutes in walking)	11	14	7.1
Coping Strategy Index (CSI Score)	15	13	13
Observations	147	219	216

# Research Lessons

- **The majority of households are food insecure in all three regions**
  - Food insecurity as measured in the survey could be transitory
- **Markets are the main source of food**, and there is plenty of food available in the market. However, **high food prices are the largest concern in all three regions**, which is in line with high (national) food inflation rates.
- **Conflict exposure high among both food insecure and food secure households**
  - Differences not statistically significant
- The relationship between household characteristics and food security vary regionally, but some patterns emerge: Larger households are more likely to be food insecure, more educated households more food secure.

# Policy Lessons

- Given the high food insecurity rates in all the regions, more information is needed for in-depth analysis. **State-level data collection is required to better identify households at risk.**
- **More data is needed to understand whether the high food insecurity rates persist over time** -whether food insecurity is transitory or chronic
- What to do with high food prices?
- There are many potential explanations for high food prices. Each will require different policy tools.
  1. Focus on understanding the sources of high food prices in the local markets
  2. Then, use appropriate policy to tackle these problems
- Future concerns: North East is seeing an influx of internally displaced people moving back from refugee camps → will increase demand for food