

Rapid Feedback Monitoring System (RFMS)

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Community enumerators collecting monthly data. Photo - CRS



Rapid Feedback Monitoring System – Overview

- **Background**

- Collecting data from ~2200 households in three districts since September, 2017 as pilot studies by Catholic Relief Services
- RFMS launched in five districts in Southern Malawi, 4200 households, in August, 2020
- Main donors were USAID and FCDO, and WB provided the technical support
- Lately expanded into nine districts and some urban areas in Zomba and Blantyre

- **Purpose of RFMS:**

- Understand resilience, and the dynamics of food security and poverty via monthly data collection
- Improve predictions, for early warning and targeting interventions
- Provide useful and timely feedback to communities and other actors

Rapid Feedback Monitoring System –Overview

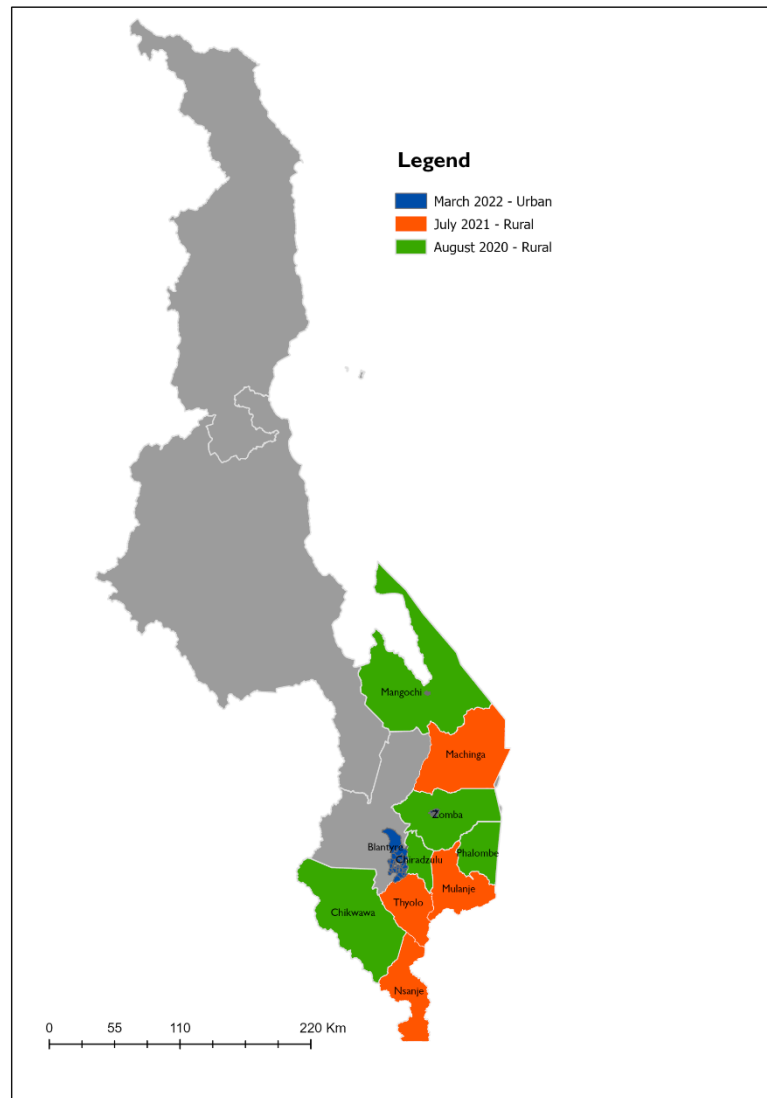
- **Sampling**

- RFMS sampling frame based on the listing information and cartography from the 2018 Malawi Population and Housing Census – representative at the district level, with randomly selected Enumeration Areas (EA) in each Traditional Authority (TA)
- Over-sampled FCDO and USAID project areas to make the sample statistically representative in those areas

- **Questionnaire**

- Multiple modules, with varying frequencies; content and frequency adjustable over time
- Monthly: food security, shocks (with modules triggered by report of certain shocks), Covid-19 impacts
- Less frequently (quarterly – six month): livelihoods, sanitation and nutrition, health outcomes and services, and SWIFT

RFMS Data Overview



DISTRICT	Aug 2020 – July 2021		July 2021 - present
	District Representative	Oversample for FCDO	District Representative
Balaka	450	350	450
Chikwawa	450	350	450
Machinga			450
Mangochi*	450	400	450
Mulanje			450
Nsanje			450
Phalombe	450	400	450
Thyolo			450
Zomba*	450		450
TOTALS		4200	4500

Four Components of RFMS

Innovative survey instruments

- CAPI enables the tracking of the same households and updating the information over time
- Flexible monthly module consisting of different topics

Decentralized data collection system

- Hiring the local enumerators who reside in the village
- Hiring and training monitored by the NSO

Innovative research and analytics

- Incorporating SWIFT for the poverty estimation
- Vulnerability analysis by Cornell University

Feedback loop to the community

- Community engagement to identify uses of the data and disseminate findings to support locally-led action

RFMS: Questionnaire Design and Sequencing

- The core RFMS monthly survey addressed food security (rCSI, HHS, and in some settings HDDS and FCS), as well as subjective shock experience
 - This is now embedded in a more complex monitoring structure that covers a wider range of indicators

Module		Baseline	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Demographics / Infrastructure	Fixed infrastructure, complete household roster														
Core Monthly	Shocks, Food Security, migration														
Monthly "Triggered"	Health, shock follow-up														
SWIFT +	Housing conditions, asset ownership														
Livelihoods	Livelihoods, agriculture														
WASH & Nutrition	Water sources, sanitation														
Covid-19	Experience with the disease and shut-down														
Project-Specific	Exposure to technologies														

Decentralized Data Entry System

Central HQ + WB support team

- Management of the human resources, payment, contracting
- Real-time data monitoring & Analysis
- Coordination with other donors

- Data sent to the cloud
- Regular report on any unusual events

- Instruction when something is wrong
- Regular sharing of the results of the data

Supervisor



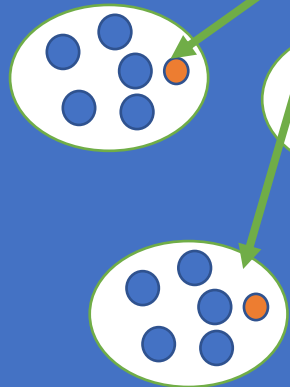
Supervisor



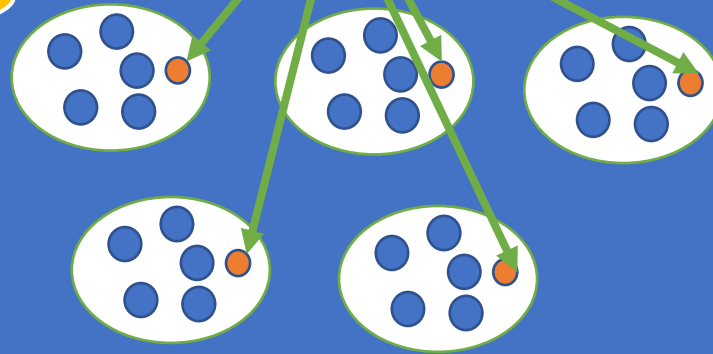
Supervisor



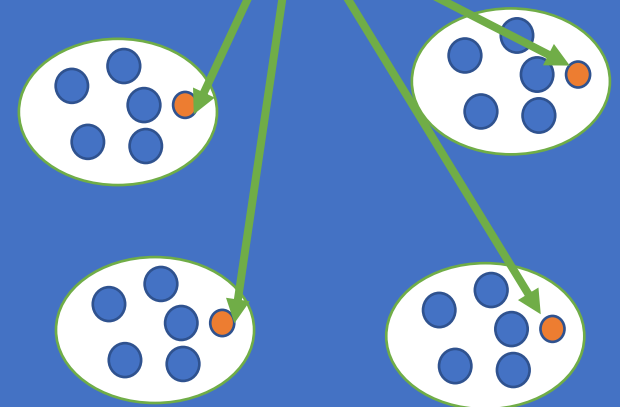
Enumerator



District 1



District 2



District 3

Village

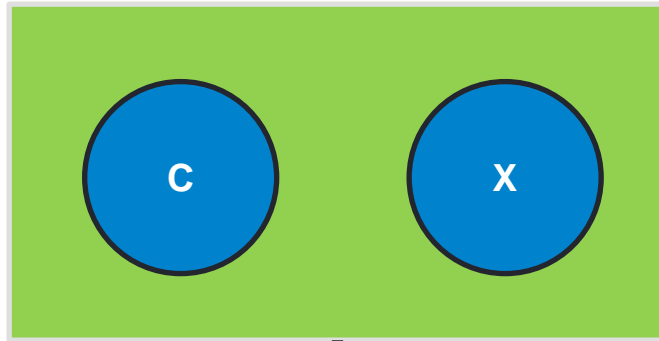
Community Dashboard: Real-time record of shocks




		Business Failure	Crop Disease/Pests	Drought/Dryspells	End of Assistance	Falling Crop Prices	Fire Damage	Flood	HH Break-up	HH Death	Illness	Livestock Disease and Death	Loss of Job/No Income	Rising Food Prices	Strong Winds	Theft
District	Blantyre Rural	21%	38%	27%	19%	7%	1%	1%	5%	6%	20%	11%	4%	38%	10%	5%
Traditional Authority Area	Kunthembwe	24%	54%	46%	14%	7%	0%	0%	6%	6%	18%	18%	4%	42%	8%	2%
	Somba	18%	21%	3%	25%	11%	1%	2%	5%	9%	23%	6%	4%	30%	14%	9%
	Chigalu	18%	28%	30%	22%	1%	0%	0%	1%	3%	24%	0%	2%	47%	6%	3%
GVH	Chikumbu	11%	91%	91%	6%	14%	0%	0%	0%	6%	6%	23%	0%	89%	0%	0%
	Gwadani	20%	3%	3%	3%	0%	0%	0%	0%	3%	20%	13%	0%	0%	0%	0%
	Kadikira	31%	71%	51%	23%	3%	0%	0%	3%	3%	51%	6%	3%	69%	0%	3%
	Kantimbanya	3%	40%	0%	86%	0%	0%	0%	3%	0%	43%	0%	0%	86%	26%	0%
	Kantukule	17%	17%	0%	6%	9%	0%	6%	3%	14%	6%	9%	3%	17%	3%	11%
	Kaphikantama	18%	85%	91%	47%	3%	0%	0%	3%	3%	9%	0%	0%	24%	18%	9%
	Kunthembwe	23%	91%	0%	6%	0%	0%	0%	3%	0%	0%	46%	3%	86%	0%	0%
	Mabala	11%	0%	0%	0%	9%	0%	0%	9%	0%	3%	11%	3%	0%	0%	9%
	Majola	23%	77%	100%	9%	0%	0%	0%	11%	9%	0%	14%	3%	3%	3%	0%
	Makanjira	17%	6%	20%	0%	0%	0%	0%	3%	3%	37%	11%	3%	63%	6%	3%
	Makunje	20%	6%	6%	6%	6%	3%	0%	3%	3%	17%	6%	3%	9%	0%	0%
	Mbanda	60%	89%	80%	77%	37%	0%	0%	34%	23%	3%	51%	17%	91%	63%	11%
	Mbvundula	6%	83%	97%	0%	3%	0%	0%	3%	0%	14%	3%	6%	3%	6%	0%
	Mdala	23%	0%	0%	17%	0%	0%	0%	0%	3%	46%	0%	3%	66%	0%	0%
	Mpagaja	9%	11%	0%	0%	0%	0%	0%	3%	6%	6%	0%	3%	9%	0%	6%
	Mwambula	3%	6%	0%	11%	6%	11%	0%	6%	6%	34%	14%	3%	23%	0%	26%
	Mwangata	83%	80%	0%	83%	57%	0%	0%	9%	34%	60%	14%	9%	86%	83%	17%
	Nthache	14%	0%	0%	3%	0%	0%	0%	0%	3%	17%	0%	3%	51%	0%	0%
	Somba 1	6%	11%	17%	6%	6%	0%	3%	3%	9%	29%	0%	9%	17%	0%	6%
	Somba 2	9%	3%	6%	9%	0%	0%	3%	3%	0%	6%	0%	0%	11%	3%	0%
Stande	26%	17%	0%	11%	3%	0%	0%	0%	9%	29%	3%	3%	0%	0%	0%	

SWIFT: Background & Methodology

Household Budget Survey (IHS4)

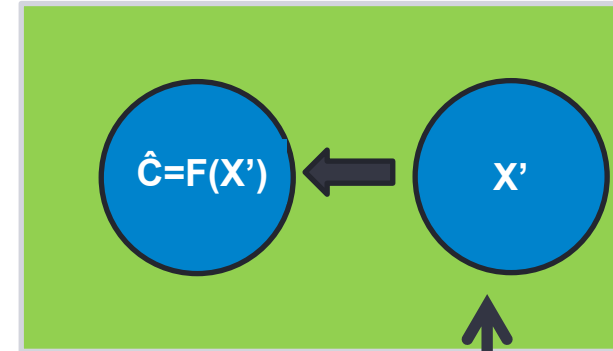


 Use *Machine Learning techniques* to find a **formula** that connect consumption with limited number of non-consumption variables

Identify only the most relevant variables X'
 $C = F(X')$ 

C: Log of Consumption
X: Variables collected by HBS
X': Among X, variables correlates the most with consumption; variables collected by HFPS
 $\hat{C} = F(X')$: Predicted consumption

RFMS survey

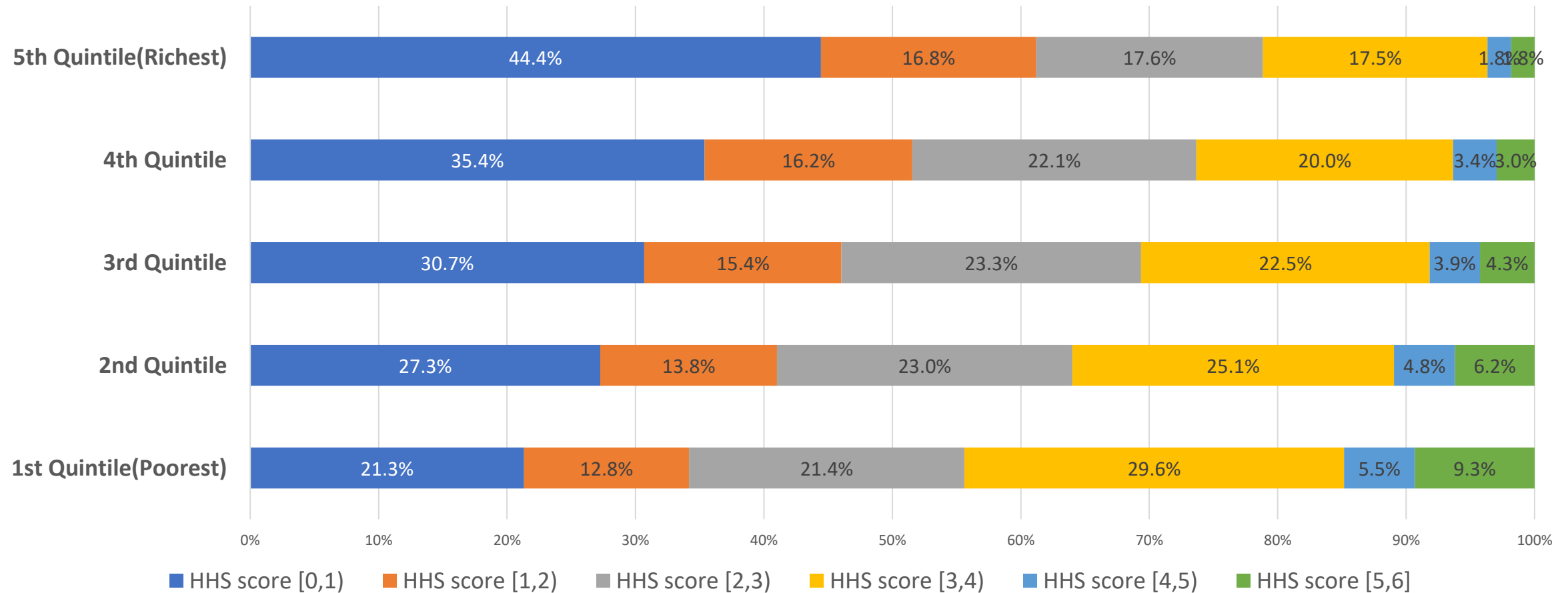


Collecting data X' using smartphones/tablets = CAPI (Computer Assisted personal interview)



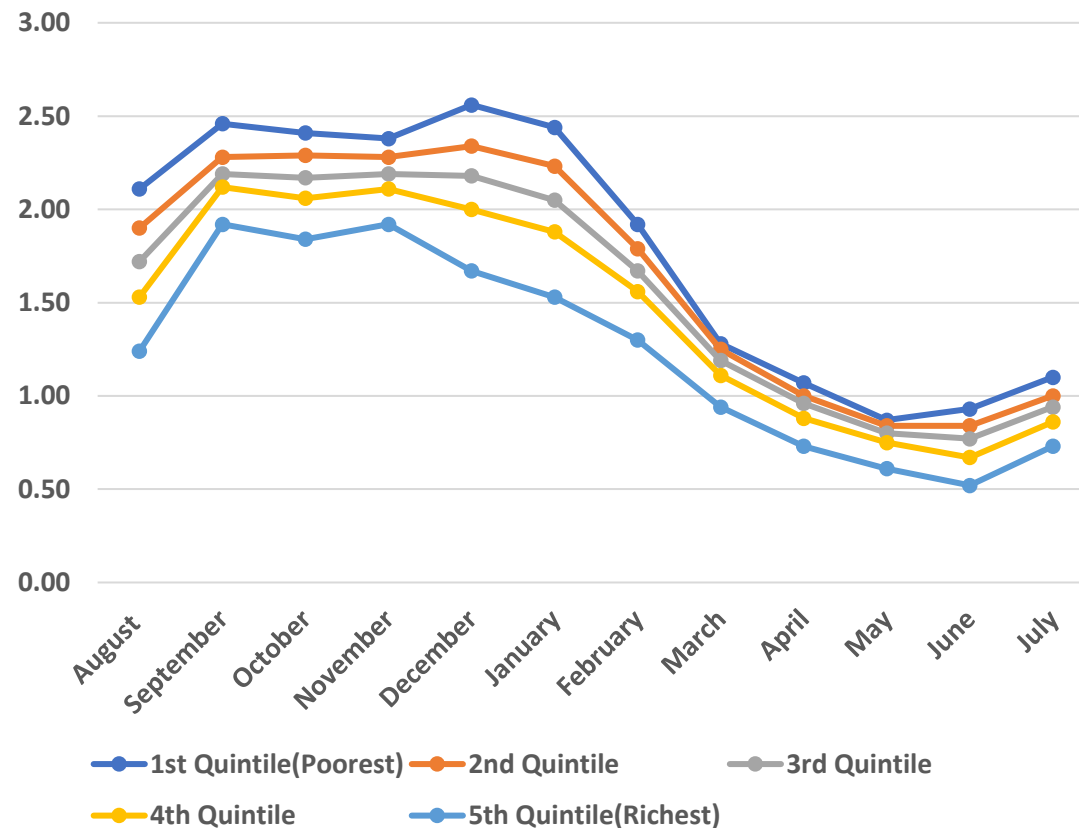
Capacities and Strategies: Across poverty levels

HHS Score Distribution

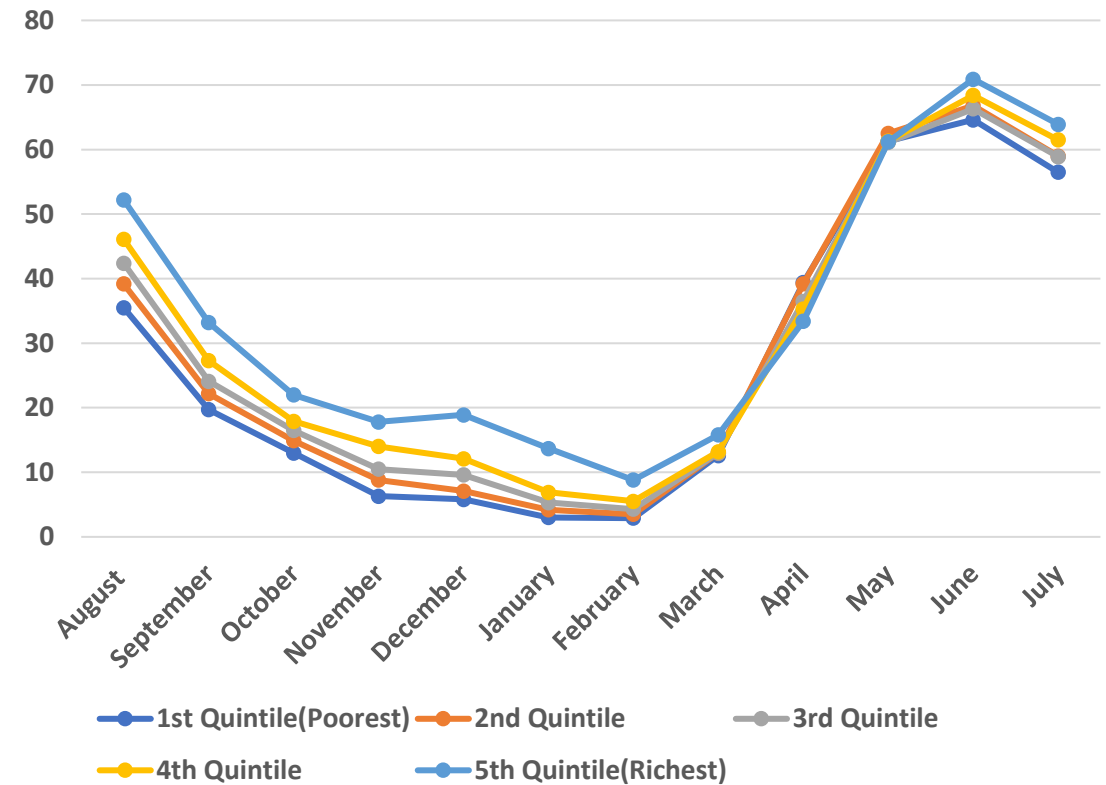


Food security: Across poverty levels

HHS Score

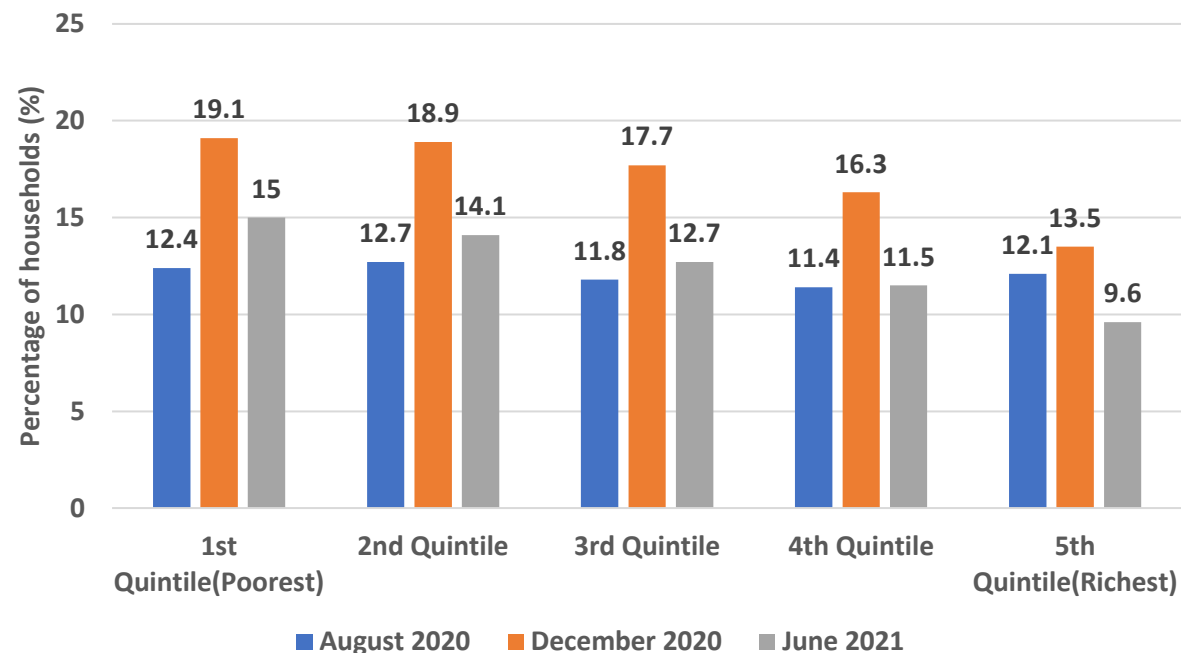


"There is a stock of maize at home"

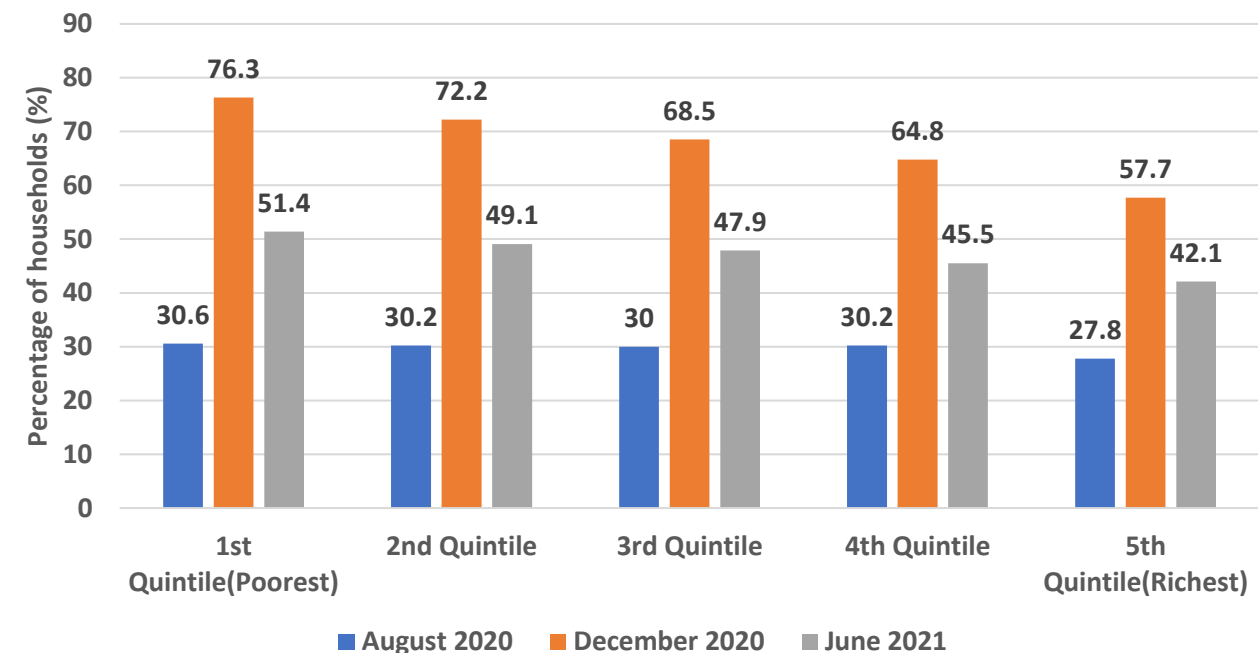


Vulnerability and resilience: Across poverty levels

Negative COVID19 impacts

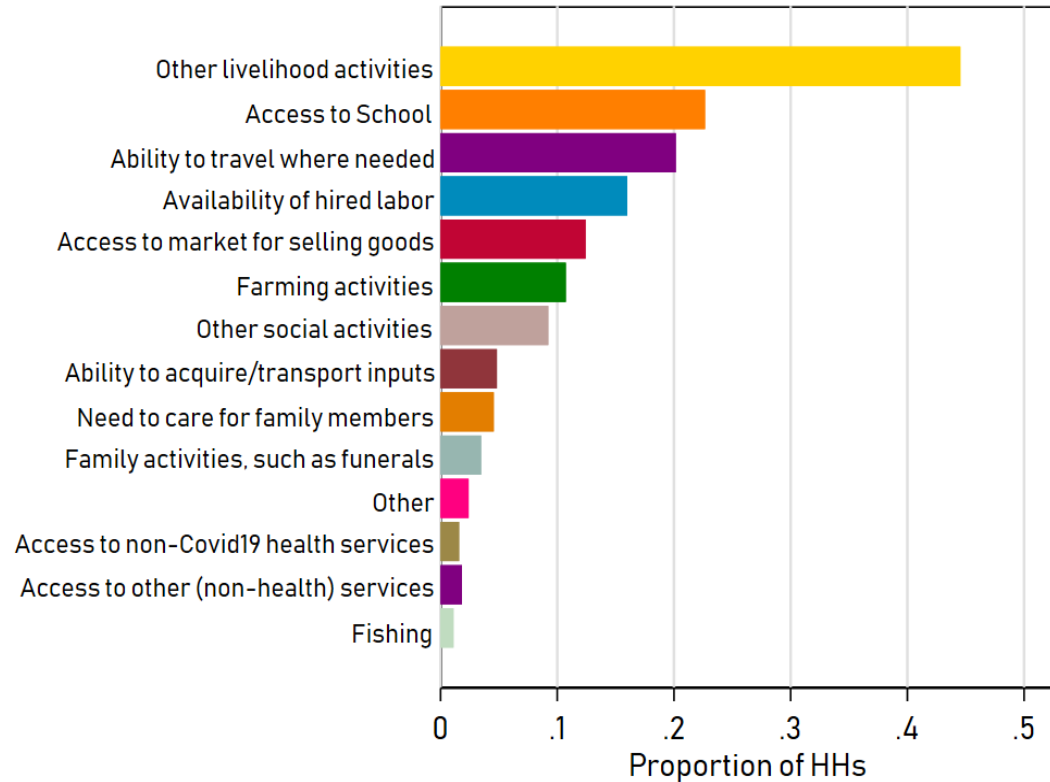


Not recovered from shocks



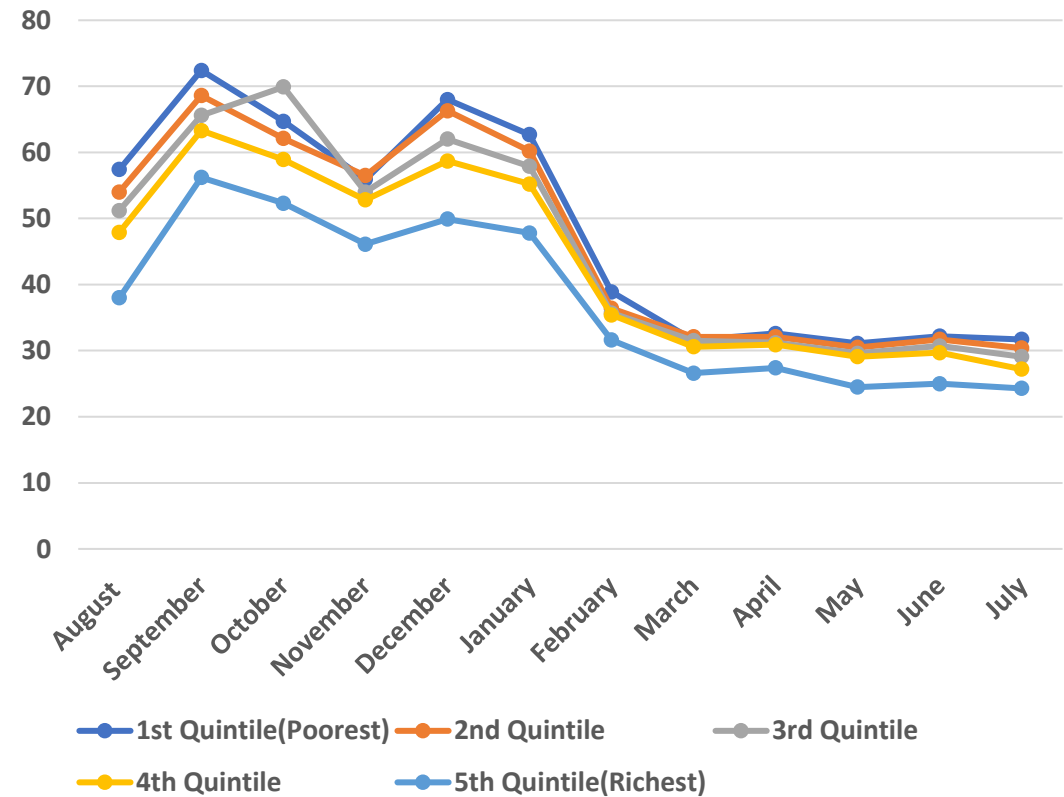
Impact of COVID19 – Reduction of the piecework

Areas of life most affected by Covid-19



Note: 20% of households reported no areas of life affected.

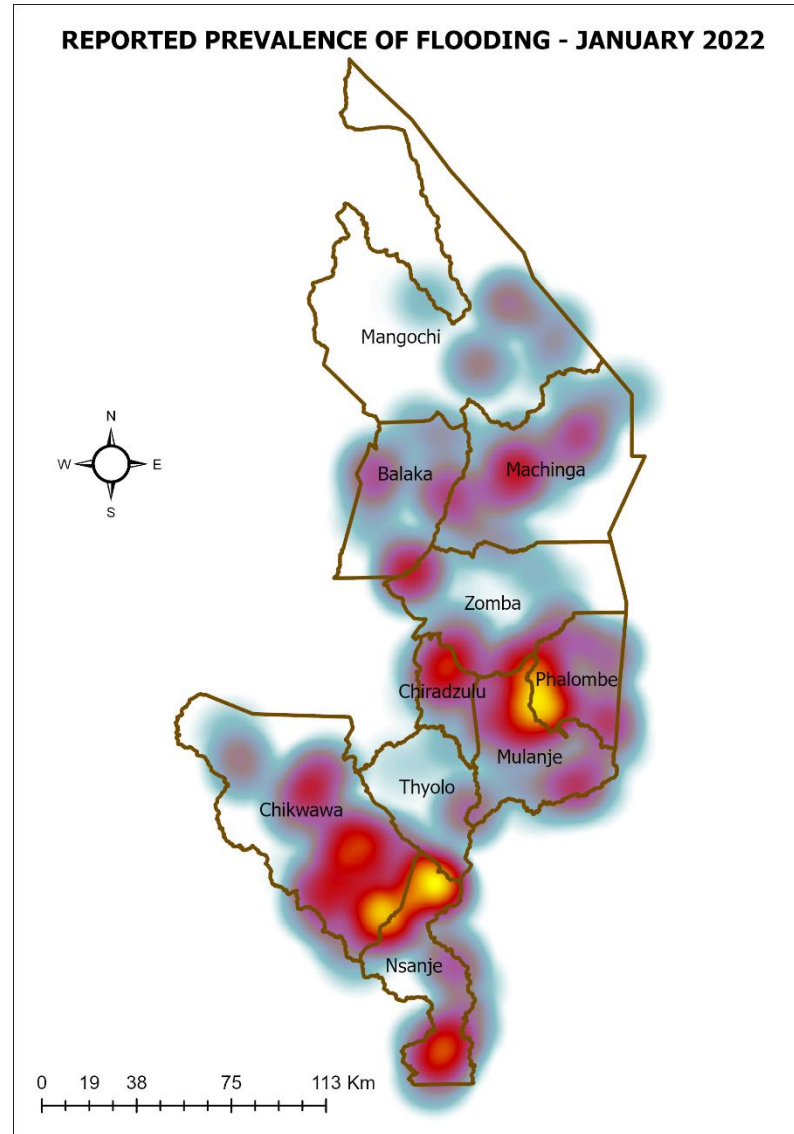
"Engaged in a piecework"



RFMS and the Impacts of Cyclone Anna



Photo: Catholic Relief Services, January 2022



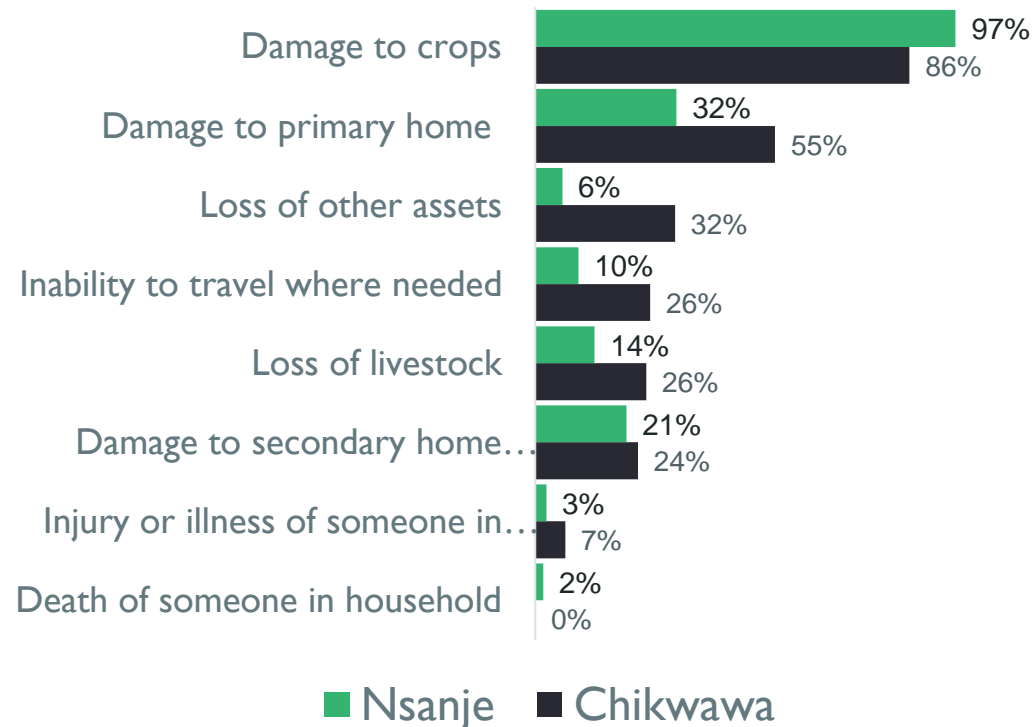
Cyclone hit – with sudden flooding and high winds – just before January data collection was scheduled to start

Heard reports from on the ground team members on the kinds of damage people were suffering; updated / adapted RFMS “flood impact” module accordingly

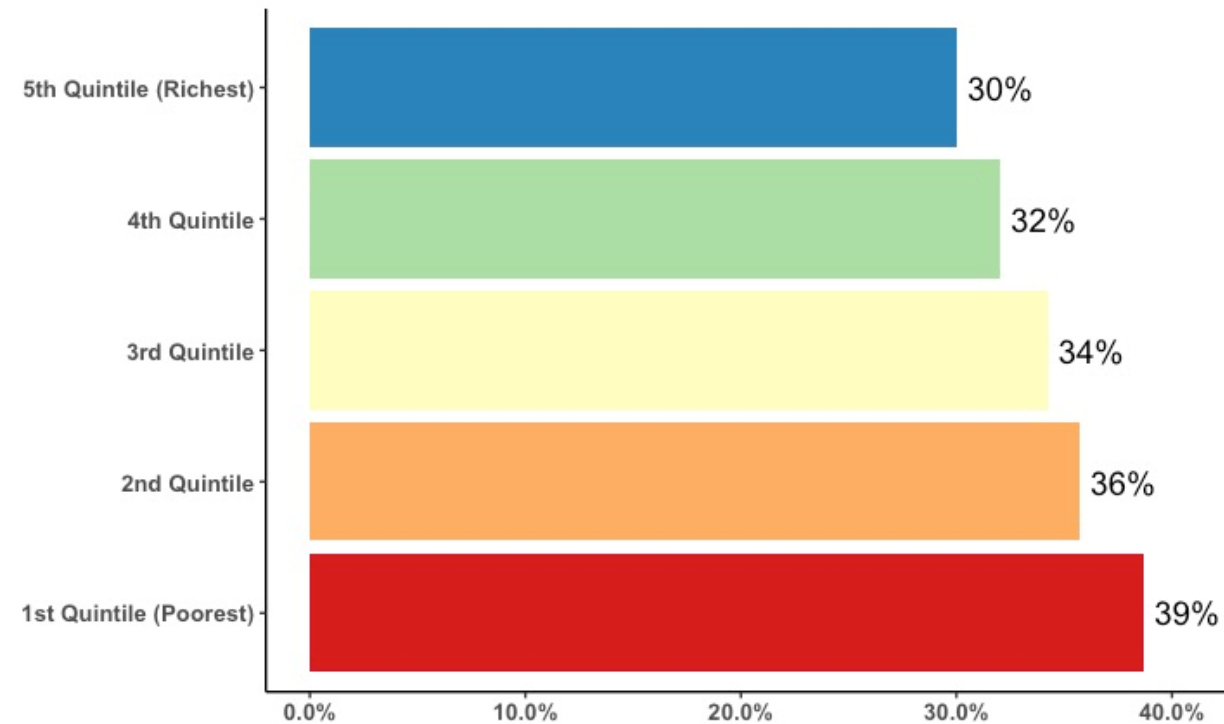
Launched less than a week after households were affected by cyclone

Vulnerability to the cyclone by poverty levels

What types of damage did your household suffer?

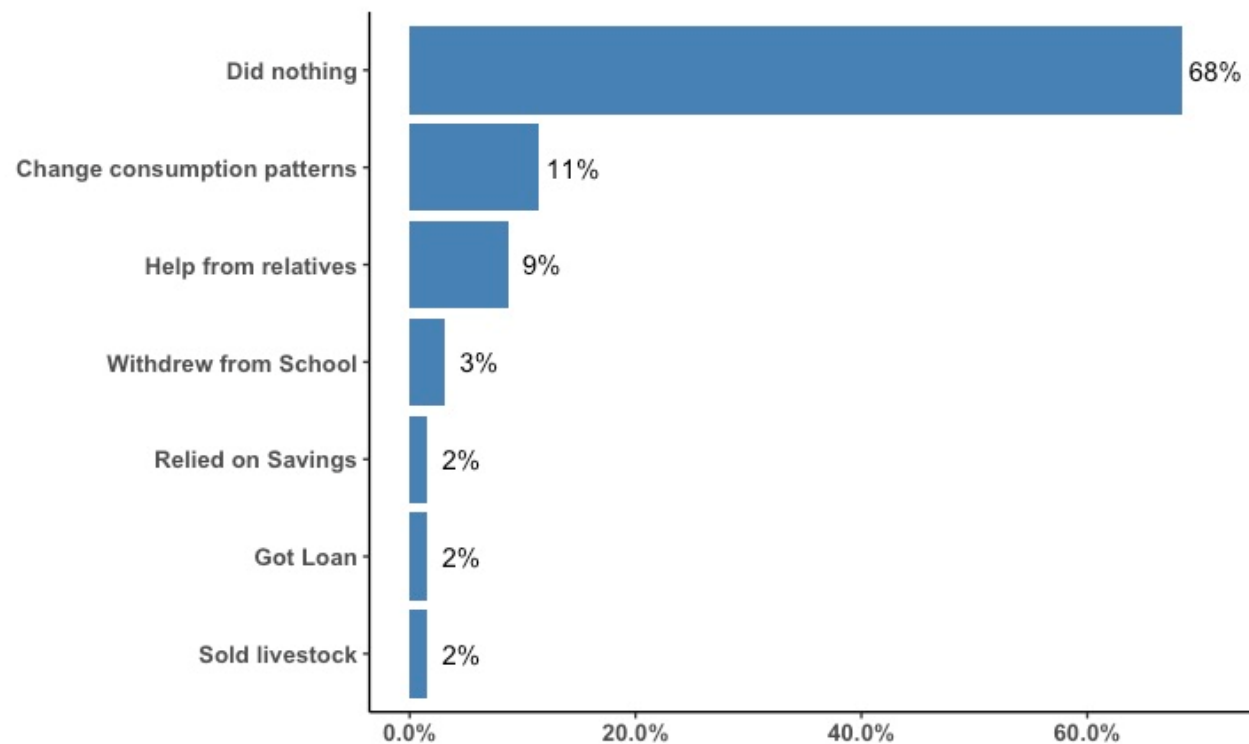


Percentage of households who have been affected by cyclone

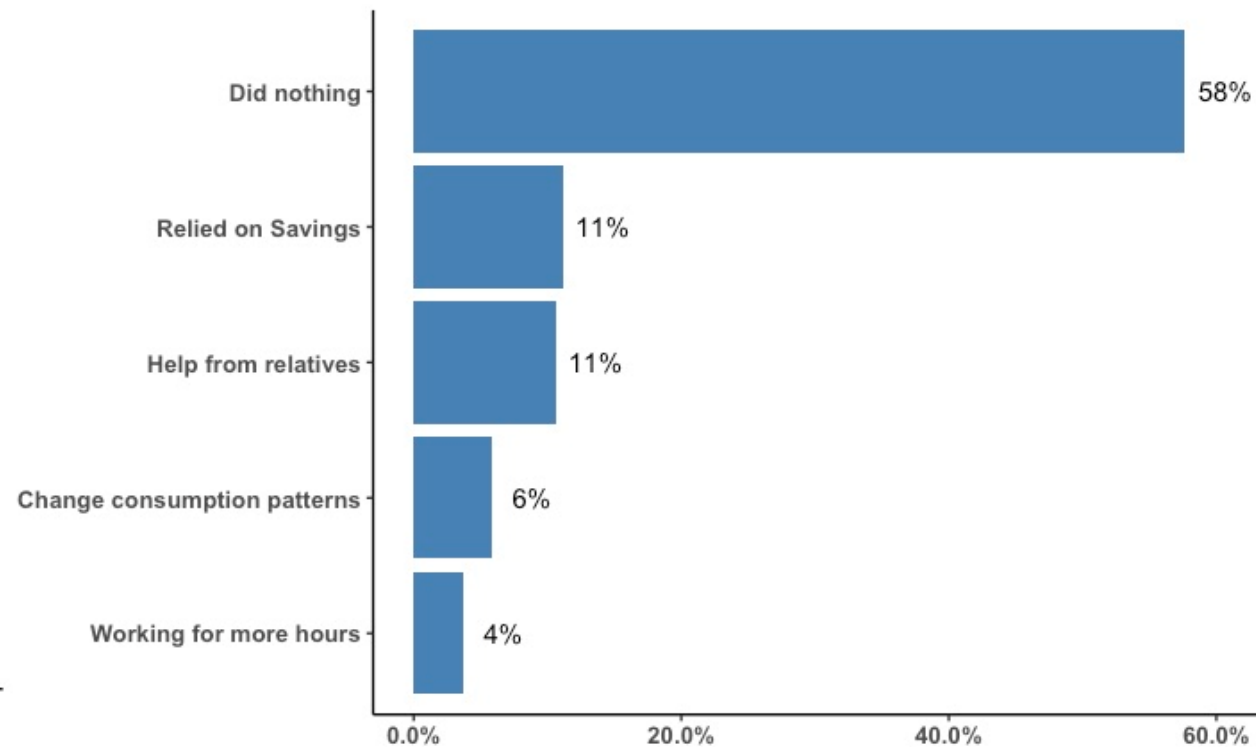


Coping strategies for the households

Top 5 coping strategies for the poorest households



Top 5 coping strategies for the richest households



Advantage and challenges of RFMS

Advantage

- RFMS demonstrated the value in high-frequency data, over an extended period
- Flexible survey tools, easily to accommodate the module for the sudden shocks
- Can be used for the project evaluation
- Running cost is low as enumerators do not have to move around the different regions
- Attrition rate is quite low
- It offers the opportunities for the capacity building for the educated but unemployed rural youth
- Unique feedback mechanism to the community
- Can be used in FCV countries as high-frequent data collection tool

Challenges

- Requires substantial initial investment
- Requires a careful monitoring of enumerators by skilled supervisors and local presence is a key
- How to incorporate RFMS in the government official data collection system