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The Khaddo Bandhob Karmasuchi (Food Friendly Program) in Bangladesh

Assessing the impact of cash and voucher transfers program on the diversification of the food basket among the ultra-poor households under the FFP

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1.1 Background

- Food based social protection in Bangladesh is mainly concentrated on distribution of rice to the ultra-poor households.

- Food Friendly Programme (FFP) of the Ministry of Food provides 30 Kg of rice for 5 months to ultra-poor households in the month of March-April and Sep- Nov for smoothening their food consumption in the situation of seasonal income loss.

- It is essential to understand how to expand the food basket of the ultra-poor households that might include nutrient dense food to enhance the diets quality.

- To generates evidence on the various modalities/ combinations for a subsequent detailed study, the Ministry of Food along with FAO undertook a rapid assessment on food friendly program (FFP) with the intervention of cash and voucher transfer to observe if there is any changes in their dietary diversity.
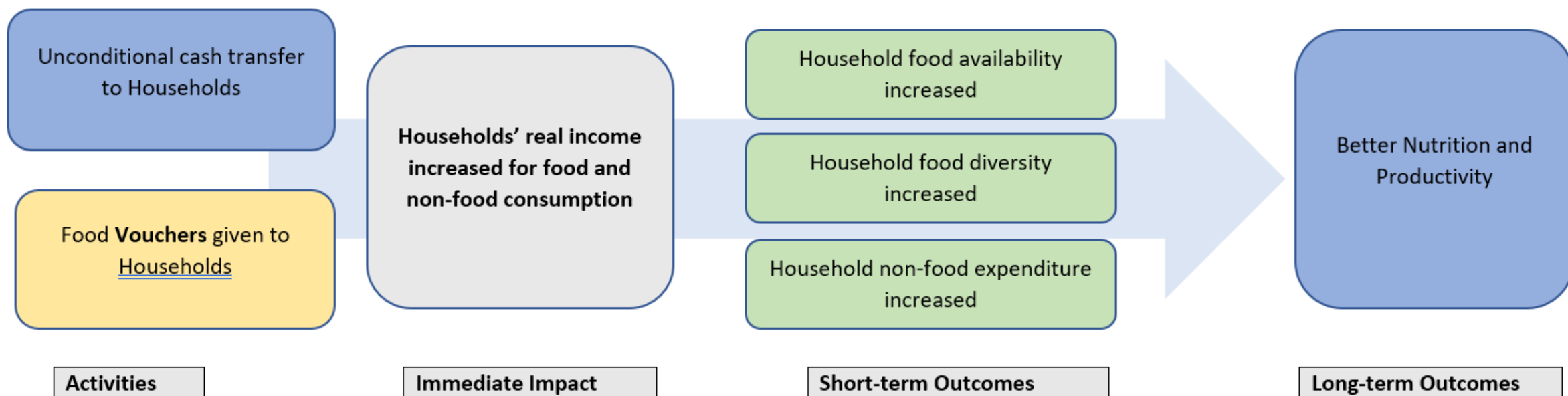
1.1 Background

- **Objective:** Better nutrition through improved dietary diversity. The aim of the program is to diversify their food basket for enhanced nutritional uptake of the ultra-poor households in selected districts in Bangladesh.

- **Modalities**: to identify HH demand for Dietary Diversity in response to their enhanced purchasing power, either by cash or voucher.

- **Locations:** Sunamgunj and Kurigram districts (as chronically food insecure under IPC report 2021)

- **Study time**: Sep 2022 – Jan 2023

- **Total Sample:** 725 households (existing Food-friendly Program beneficiaries)
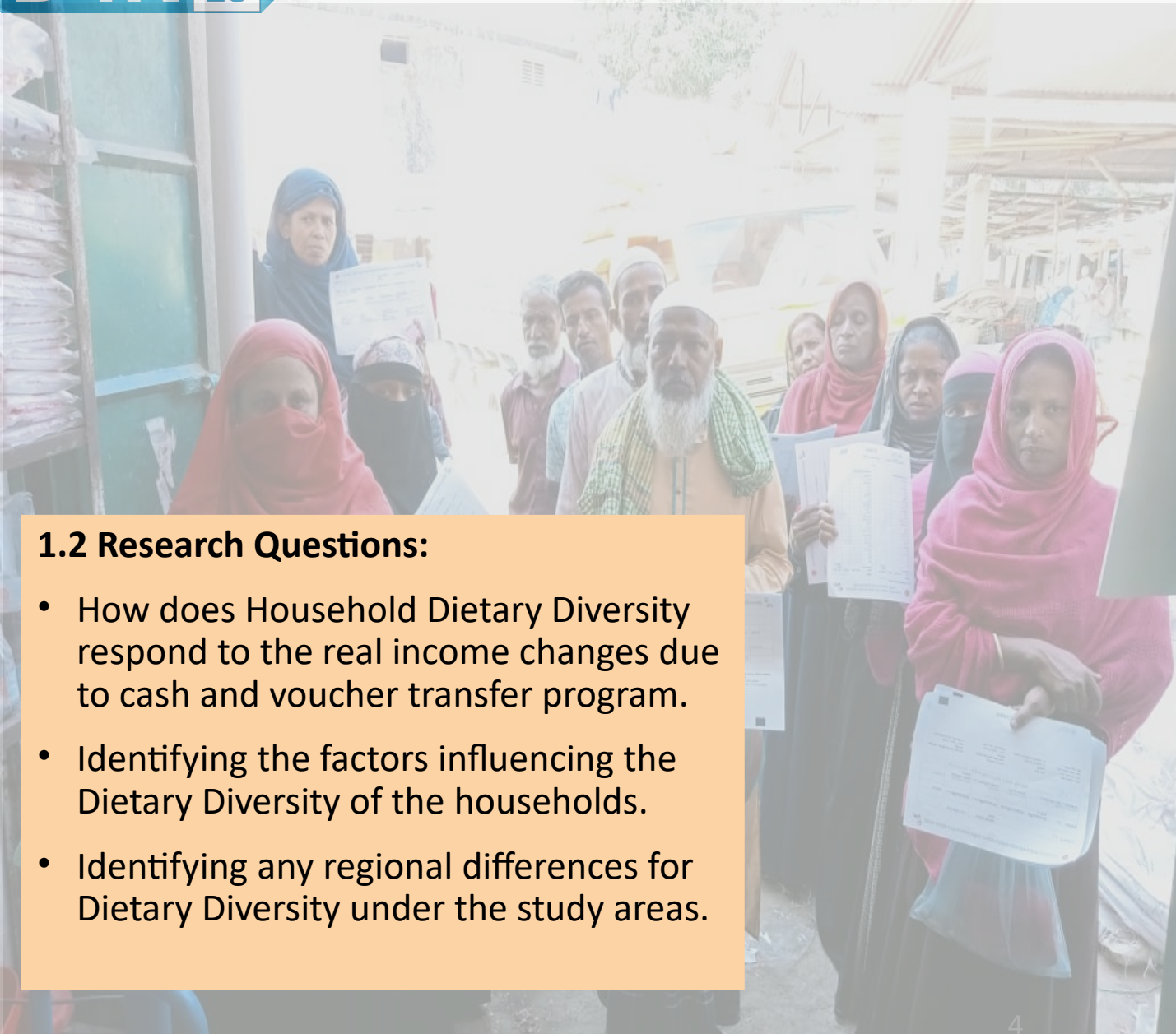
1.2 Research Questions:

- How does Household Dietary Diversity respond to the real income changes due to cash and voucher transfer program.

- Identifying the factors influencing the Dietary Diversity of the households.

- Identifying any regional differences for Dietary Diversity under the study areas.

1.2 Conceptual framework

Activities
- Unconditional cash transfer to Households
- Food **Vouchers** given to <u>Households</u>

Immediate Impact
- Households' real income increased for food and non-food consumption

Short-term Outcomes
- Household food availability increased
- Household food diversity increased
- Household non-food expenditure increased

Long-term Outcomes
- Better Nutrition and Productivity

Assumptions:
-HHs are receiving FFP rice
-HHs have adequate information on food diversification
-HHs possess a mobile wallet account and redeem food vouchers.

-HHs rationally utilize the cash and food vouchers
-Income of HHs doesn't change within the study time
-HHs face no abnormalities, e.g., natural disaster, etc., during this period

-HHs rationally choose food and non-food commodities
-HHs have access to food and non-food commodity markets

-HHs act rationally to maximize health and productivity

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2. Sample and intervention

- A sample of size n=376 ensures that a two-sided test with α =0.05 has 90% power to detect a 5% difference in the proportion of households being ultra-poor households.

- We have taken 725 households for our analysis to make the study robust.

- DC Food- Kurigram and Sunamganj provided extensive support by providing the lists of updated beneficiaries of FFP, contacting the local administrations, dealers, UCFs.
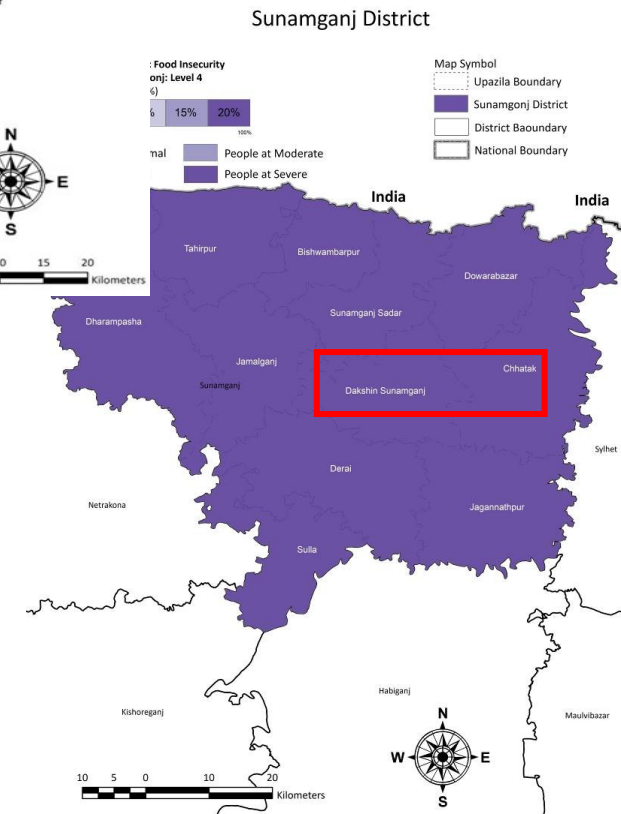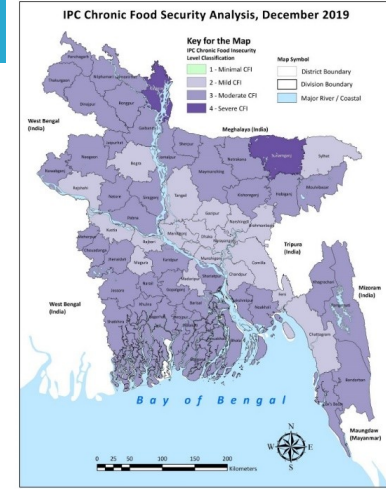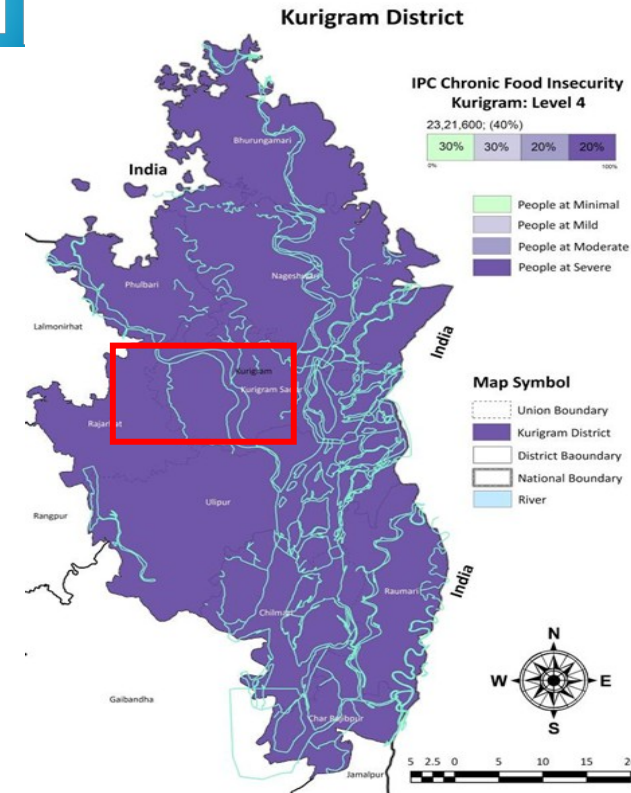
According to Food Security Cluster (FSC) Bangladesh, the minimum food package in Bangladesh was worth of BDT 4500 equivalent cash or in-kind per month per household in 2022 (Inflation adjusted).

- Tier 1 (146 HHs): Government existing FFP Rice- 30 KG (FFP) (Control)
- Tier 2 (283 HHs): Government existing FFP 30 KG of rice + Food Security Cash grant BDT 3500
- Tier 3 (296 HHs): Government existing FFP 30 KG of rice + Food Security Voucher worth of BDT 3500

2. Sample and intervention

- Baseline survey: 10-18 Sep 2022

- Intervention:
  - Cash transfer: 28-30 Nov 2022
  - Voucher transfer: 28 Nov – 26 Dec, 2022

- Endline Survey: 21-28 Jan 2023

- BDT 3500 worth of Cash and Voucher were transferred to each household for one month
- Cash (household, N=283) was transferred through mobile wallet Cash was supposed to spent on food and non-food
- Voucher (household, N=296) was only restricted to 23 food items from a specific shop
- Paper voucher was used to access food with FAO supervision
- Control (household, N=146) didn't receive cash or voucher

Total 725 HHs

District (N=2)	Kurigram 359 HHs		Sunamganj 366 HHs	
Upazila (N=4)	Kurigram Sadar	Razarhat	Sunamganj Sadar	Chatok
Union (N=10)	Jatrapur (73 HHs) Voucher	Bidyanondo (73 HHs) Voucher	Korbannagar (73 HHs) Cash	Chatok Sadar (68 HHs) Cash
	Mogholbasha (71 HHs) Control	Ghoriyaldanga (70 HHs) Cash	Lokkhonsri (75 HHs) Control	Gobindagonj (75 HHs) Voucher
		Chinai (72 HHs) Cash		Jaoyabazar (75 HHs) Voucher

3. Endline Outcomes comparison

Comparison between Baseline and Endline of different food security indicators across different tiers

Intervention	Outcome Indicators	Baseline (before intervention)	Endline (after intervention)	P-value	Change
Tier1 (Control HH)	HDDS	(5.49, SE=0.15)	(5.56, SE=0.09)	.700	Increased
	FCS*	(47.47, SE=1.09)	(42.09, SE=0.8)	.000	Decreased
	HHS*	(2.01, SE=0.09)	(0.89, SE=0.08)	.000	Decreased
	MDDW*	(3.07, SE=0.08)	(2.46, SE=0.07)	.000	Decreased
	CDDS*	(3.05, SE=0.1)	(1.82, SE=0.09)	.000	Decreased
Tier2 (Cash HH)	HDDS*	(6.11, SE=0.1)	(6.6, SE=0.12)	.002	Increased
	FCS*	(49.46, SE=0.75)	(53.77, SE=0.76)	.000	Increased
	HHS*	(1.38, SE=0.07)	(0.58, SE=0.06)	.000	Decreased
	MDDW*	(3.3, SE=0.06)	(3.58, SE=0.08)	.006	Increased
	CDDS	(3, SE=0.09)	(2.96, SE=0.11)	.806	Decreased
Tier3 (Voucher HH)	HDDS*	(5.41, SE=0.1)	(7.19, SE=0.11)	.000	Increased
	FCS*	(44.46, SE=0.79)	(51.05, SE=0.67)	.000	Increased
	HHS*	(1.74, SE=0.07)	(0.77, SE=0.08)	.000	Decreased
	MDDW*	(3.37, SE=0.07)	(3.61, SE=0.08)	.024	Increased
	CDDS*	(3.27, SE=0.08)	(2.77, SE=0.12)	.001	Decreased
* Significant at 5% significance level					

4. Impact of the program:

$$Y = \beta_0 + \beta_1 * [Time] + \beta_2 * [Intervention] + \beta_3 * [Time*Intervention] + \beta_4 * [Covariates] + \varepsilon$$

HDDS	T1 vs T2 (Ctrl vs Cash)			T1 vs T3 (Ctrl vs Voucher)			T2 vs T3 (Cash vs Voucher)		
	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level
Treatment	.224	4.690	.000	.067	1.444	.149	-.179	-4.401	.000
Time	.048	.791	.429	.037	.633	.527	.153	3.828	.000
Impact	.110	1.579	.115	.407	6.111	.000	.269	5.490	.000
Control variables	Yes			Yes			Yes		

CDDS	T1 vs T2 (Ctrl vs Cash)			T1 vs T3 (Ctrl vs Voucher)			T2 vs T3 (Cash vs Voucher)		
	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level
Treatment	.024	.500	.617	.110	2.187	.029	.075	1.748	.081
Time	-.391	-6.423	.000	-.385	-6.117	.000	-.005	-.123	.902
Impact	.371	5.343	.000	.193	2.695	.007	-.137	-2.660	.008
Control variables	Yes			Yes			Yes		

MDD-W	T1 vs T2 (Ctrl vs Cash)			T1 vs T3 (Ctrl vs Voucher)			T2 vs T3 (Cash vs Voucher)		
	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level
Treatment	.110	2.262	.024	.151	3.024	.003	.046	1.067	.286
Time	-.263	-4.230	.000	-.247	-3.952	.000	.124	2.913	.004
Impact	.375	5.287	.000	.312	4.371	.000	-.029	-.557	.578
Control variables	Yes			Yes			Yes		

FCS	T1 vs T2 (Ctrl vs Cash)			T1 vs T3 (Ctrl vs Voucher)			T2 vs T3 (Cash vs Voucher)		
	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level
Treatment	.086	1.844	.066	-.064	-1.335	.182	-.201	-4.834	.000
Time	-.245	-4.145	.000	-.248	-4.125	.000	.172	4.198	.000
Impact	.402	5.953	.000	.479	6.985	.000	.080	1.592	.112
Control variables	Yes			Yes			Yes		

| HHS	T1 vs T2 (Ctrl vs Cash)			T1 vs T3 (Ctrl vs Voucher)			T2 vs T3 (Cash vs Voucher)		
	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level	Standardized Coefficients (Beta)	t-stat	sign. level
Treatment	-.296	-6.667	.000	-.198	-4.296	.000	.105	2.640	.008
Time	-.600	-10.585	.000	-.550	-9.520	.000	-.313	-8.020	.000
Impact	.255	3.946	.000	.126	1.911	.056	-.086	-1.797	.073
Control variab	Yes			yes			Yes		

Cash Utilization

- Mostly on Food (58%), Livelihood (12%), Health (13%)
- In Sunamganj district, HH purchased more food and health than in Kurigram district.
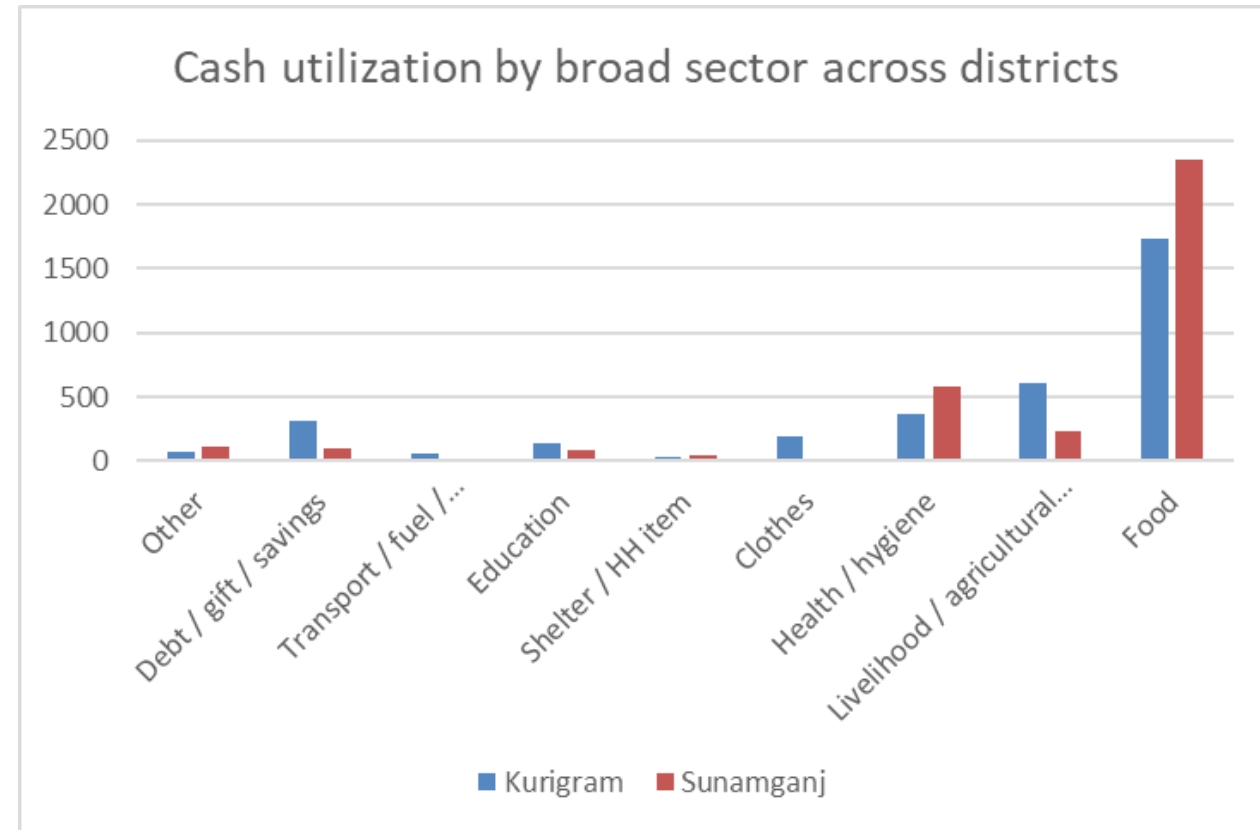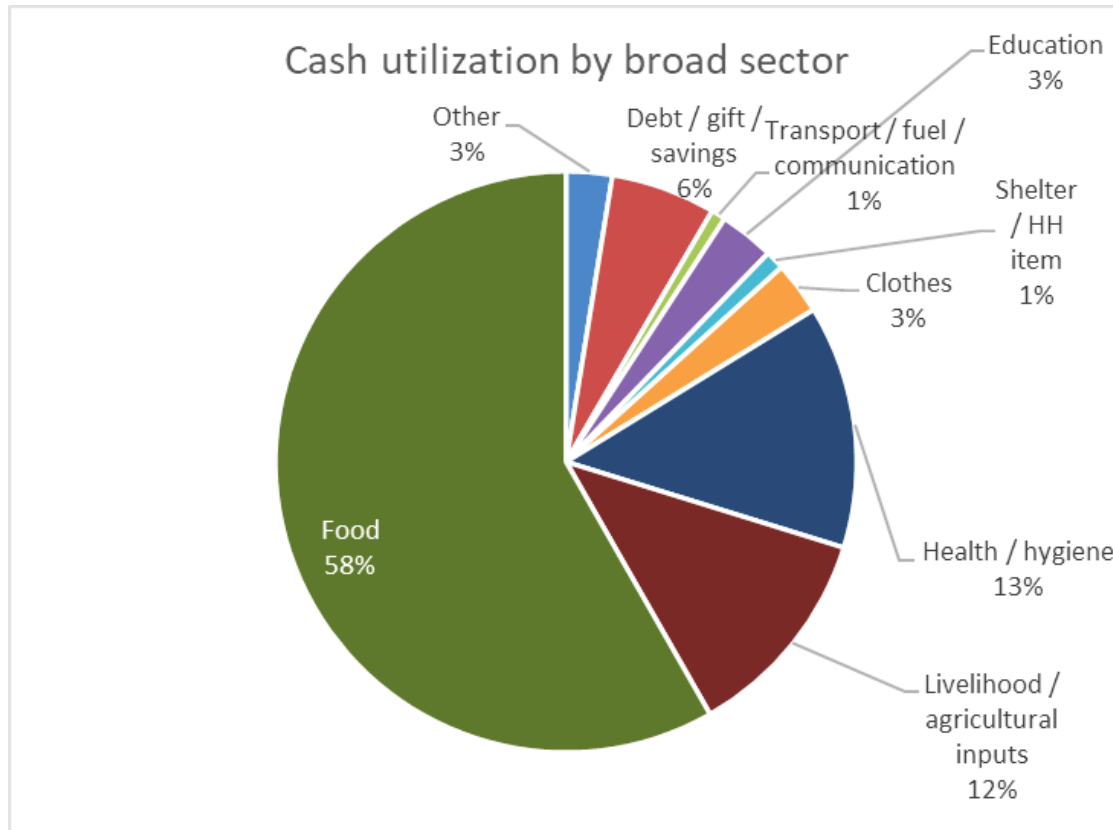
Cash Utilization

- HHs in Sunamganj purchased more non-cereal food than that of hhs in Kurigram.

- HHs in Sunamganj preferred more fish, edible oil, meat, Pulses, vegetables, and eggs than the hhs in Kurigram

- HH in Kurigram mostly purchased cereals such as rice and wheat.

Cash utilization by food group

Legend: ■ Sunamganj ■ Kurigram
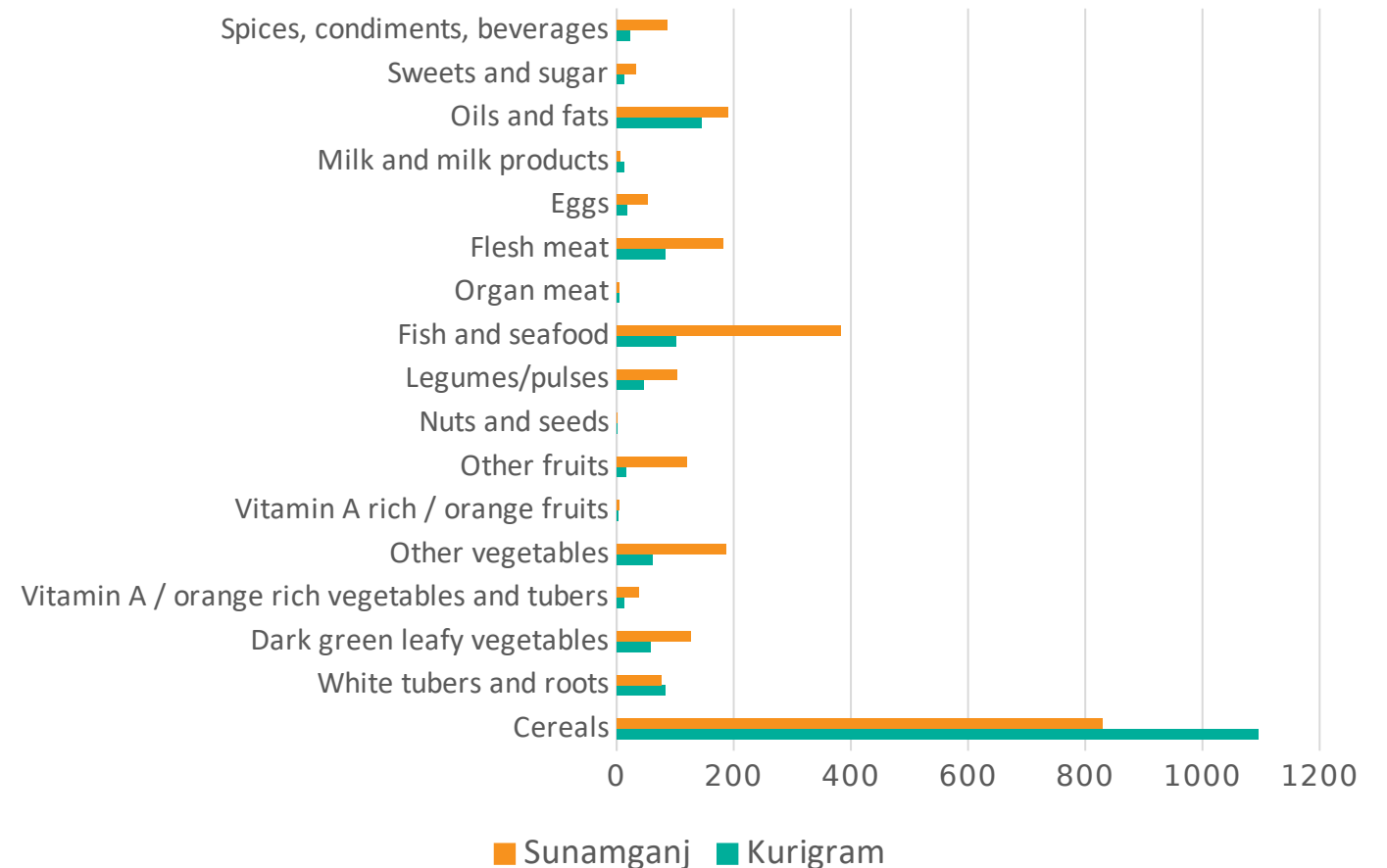
Voucher Utilization

- HHs in Sunamganj purchased more non-cereal food than that of hhs in Kurigram.

- HHs in Sunamganj purchased almost half amount of rice and wheat than the hhs in Kurigram

- HH in Kurigram mostly purchased cereals such as rice and wheat.

Voucher utilization by food groups

Legend: Sumanganj (orange), Kurigram (teal)
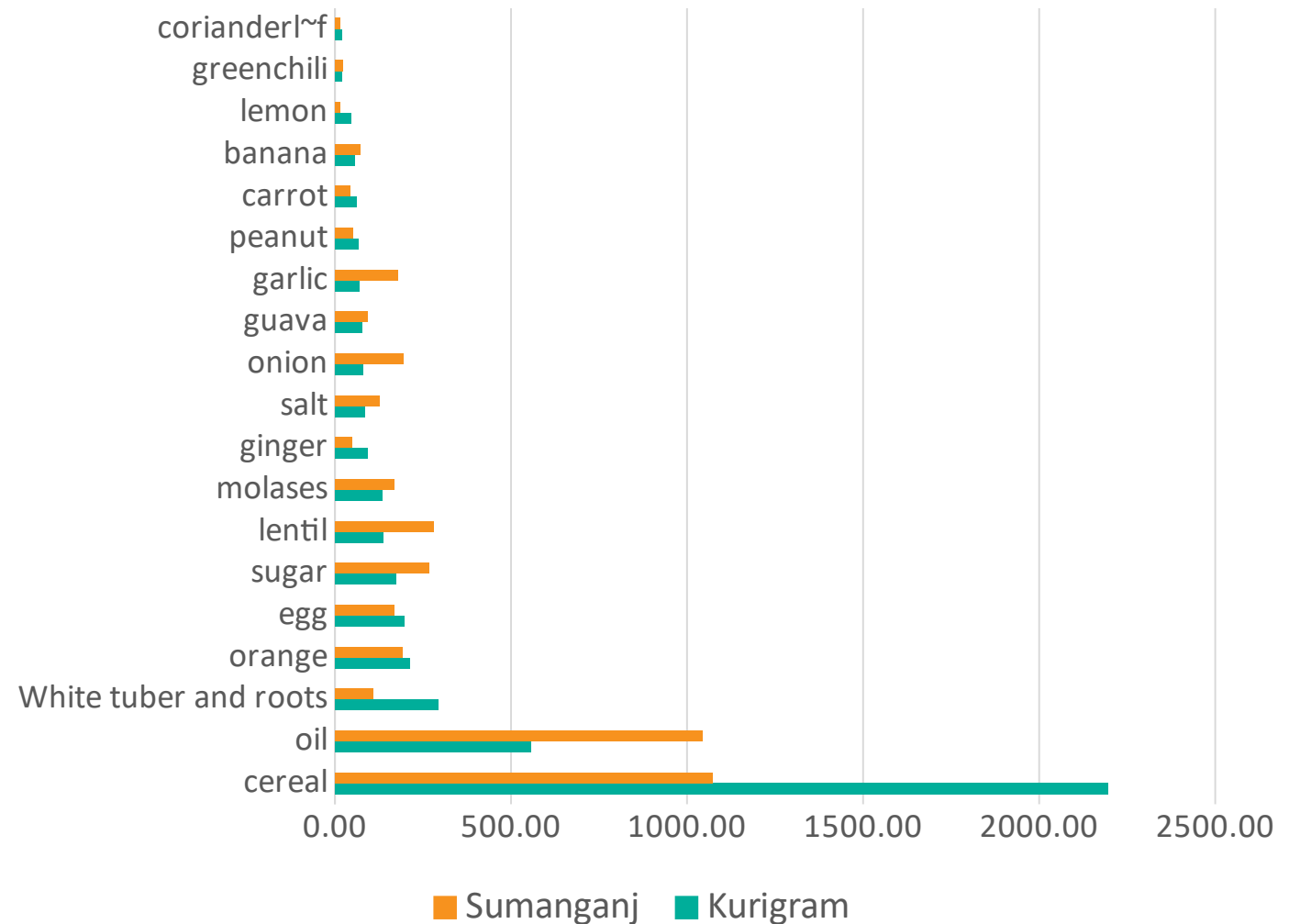
5. Conclusion

- Cash and voucher transfer program significantly improves the dietary diversity of the ultra-poor households

- Cash was more effective than voucher in some outcome indicators such as CDDS and HHS, however, voucher restricted some food groups due to its perishability (meat, fish) and international restrictions (powder milk)

- Voucher transfer program worked better for HDDS

- No significant difference between cash and voucher found in FCS and MDD-W.

- It seems that the results are mixed. However, both program are effective in improving Food security in the household.

- Cash receivers mostly used the money for purchasing food, livelihood items, and health services

- Cash users in terms of food mostly purchased cereals, fish and meat, and edible oil.

- Voucher receivers purchased mostly rice, edible oil, and lentil.

- Households in Sunamganj purchased diversified food than the households in Kurigram.

- Demand for cereals are still high in both groups in both districts.

6. Policy Implications

- Food Friendly Program (FFP) rice allocation to the ultra-poor households in Kurigram and Sunamganj is inadequate to meet their requirement.

- Government may consider enhancing the quantity of rice so that they can last for full duration of the lean period.

- Government may also consider diversifying the entitlements under the Food Friendly Program (FFP) and include edible oil, lentils, and other basic food commodities.

- Both cash and voucher transfer program may be implemented in scale in a nationally representative sample size to generate better evidence on impact.

Thank you