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Market Functionality Assessment on Bhasan Char, Bangladesh

Fostering Growth in the Embryonic Market for Rohingya Refugee Resilience

RAM and Supply Chain Unit, Cox's Bazar

September 2023

Acknowledgments

The Market Assessment on Bhasan Char was diligently executed in August 2023, spearheaded by the dedicated team of Research, Assessment, Monitoring (RAM) and Supply Chain- Retail unit of WFP. The General Food Assistant (GFA) unit played a crucial role in enhancing the assessment process. Additionally, the Cash-Based Transfers (CBT) unit provided essential technical review, further bolstering the credibility of the assessment findings.

We also extend our heartfelt gratitude to our partners, Community Development Centre (CODEC) and Islamic Relief Bangladesh (IRB) for their assistance in providing enumerators, and data collectors support, augmenting the accuracy of our data collection efforts.

Executive summary

The market on Bhasan Char Island is nascent but promising. It is primarily driven by the demand from the refugee population, which accounts for the majority of customers. The market has experienced positive growth since the introduction of Cash-Based Transfer (CBT) interventions.

The island faces unique challenges in sustaining its inhabitants, relying heavily on neighbouring markets for essential supplies. The intricate network of interconnected markets, facilitated by waterways, underpins Bhasan Char's vital supply sources. Chattogram and Noakhali emerge as the principal pillars supporting the island's food procurement system.

Market Functionality

While infrastructure and services dimensions have remained consistent, several dimensions have evolved from 2021. The introduction of the E-vouchers enriched the assortment and availability, particularly in fresh food. The resilience dimension improved due to better communication, response mechanisms, and increased stock capacity. The food quality dimension also saw marked improvement thanks to limited humanitarian market interventions. However, the Price dimension deteriorated due to national market volatility and food inflation. Competition declined, primarily because more Rohingya traders now rely on Bangladeshi traders' monopoly compared to 2021.

Key Challenges and Risks

Limited market access: The geographical isolation of the island and the regulated transportation system make it difficult for humanitarian actors, beneficiaries, and goods to move freely. This can make it difficult to implement and monitor market-based interventions.

High Food Prices: Elevated food prices attributed to multi-mode handling and transportation requirements, spoilage, and associated costs significantly impact affordability.

Infrastructure deficiency: The inadequate land for market infrastructure, which is further exacerbated by the region's frequent changes in weather conditions, rough seas, and vulnerability to natural disasters, makes it difficult for markets to function effectively. This can lead to high prices and limited availability of goods.

Financial service gaps: The absence of physical bank branches, limited availability of Mobile Money Transfer agents and microfinance institutions limit the availability of financial services for traders. This can make it difficult for them to invest in their businesses and grow their operations.

Regulatory framework: The stringent regulations enforced by the Navy, Camp in Charge (CiC), and the Market Committee can add complexity to market operations. For example, restrictions on free and open transport movement from different locations from Bhasan Char can make it difficult for traders to get the goods they need.

Rohingya movement uncertainty: The uncertain status of the Rohingya relocation on Bhasan Char deters business establishment and investment. This can stifle market growth and economic development.

Entitlement Utilization: Concerns about beneficiaries selling and bartering essential items potentially affect food security.

Recommendations:

Expand E-Vouchers: E-Vouchers offer greater flexibility and choice for beneficiaries and can help mitigate the risks associated with other transfer modalities.

Diversify retailer engagement: Engage a diverse range of retailers to create a more competitive environment and prevent price exploitation.

Implement proactive price monitoring: Monitor prices regularly to ensure beneficiaries have access to affordable food.

Diversify product assortment: Work with suppliers to diversify available products, including perishable food.

Strengthen the supply chain: Invest in a stable supply chain to reduce disruptions and ensure that beneficiaries have access to the goods they need.

Invest in market facilities: Invest in durable market structures that can withstand adverse weather conditions. Additionally, consider dispersing these facilities geographically across the island to facilitate easy access for all stakeholders, enhancing market functionality and resilience.

Develop contingency plans for extreme weather: Develop comprehensive contingency plans for extreme weather events to protect the market and its stakeholders. This should include strategies for meeting the beneficiaries' needs throughout the duration of such events.

Promote economic empowerment and self-reliance: Support the development of livelihood opportunities for Rohingya refugees, to reduce their dependence on humanitarian assistance.

Introduce an inclusive business model: Ensure that both Bangladeshi and Rohingya traders have equitable opportunities in the market.

Potential CBT Expansion:

To cater to beneficiary preferences, CBT expansion should prioritize E-vouchers alongside cash assistance. E-vouchers offer greater flexibility and choice in purchasing decisions, ensuring WFP's assistance provision with more effectiveness.

In conclusion, addressing the multifaceted challenges and risks faced in the Bhasan Char market is crucial to ensuring the sustainability and effectiveness of humanitarian assistance programs. The recommendations outlined here, if implemented collaboratively with relevant stakeholders, hold the potential to improve market functionality, empower beneficiaries, and enhance overall food security and well-being on the island.

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1. Introduction

Bhasan Char, an island located off the coast of Bangladesh, has been designated as a resettlement area for Rohingya refugees. In late 2020, the Government of Bangladesh initiated the relocation of refugees from Cox's Bazar camps to Bhasan Char, situated approximately 60 km away from the mainland. The remote location poses challenges for the community, including limited access to livelihood opportunities and essential goods. As the construction phase of the island's infrastructure scaled down after the completion of major clusters, the focus of traders shifted towards catering to the needs of various stakeholders, including both the Rohingya population and Bangladeshi security forces and NGO workers. Assessing the functionality of these evolving markets is vital to ensure that the community's food security and economic well-being are adequately supported.

As of August 2023, the World Food Programme (WFP) is providing monthly humanitarian assistance to 29,737 Rohingya Refugees on Bhasan Char Island (~7,039 Households). The assistance is delivered through fixed commodity vouchers to 75 percent refugees, with a pilot project introducing e-vouchers to 25 percent of refugees in August allowing them to access to fresh food items and animal protein. WFP plans to expand the E-Voucher program and leverage market-based interventions to improve beneficiaries' access to a diverse food basket. The Market Functionality Index (MFI) Assessment provides valuable insights into WFP's Cash-Based Transfer (CBT) operations.

2. Aims And Objectives

The Market Functionality Assessment aims to evaluate the functionality of markets in Bhasan Char, with a focus on understanding the supply, availability, affordability, and access to essential goods and services for the Rohingya community. The assessment provides valuable insights to design targeted interventions and support the development of market systems that meet the community's needs and promote their economic resilience.

Some specific objectives are-

a. **In-depth understanding of market functionality:** Assess the specific context of Bhasan Char and gain insights into the structure and functioning of local markets.
b. **Evaluation of the retail supply chain structure:** Re-assess market capacity to align with WFP programme objectives, considering impacts on retail market supply and demand, and overall supply chain to secondary markets.
c. **Analysis of the value equation for refugees:** Identify market inefficiencies, recommend supply chain enhancements to bolster markets, optimizing beneficiaries' purchasing power and enhancing the value equation.
d. **Assessment of market competitiveness:** Evaluate the level of competition, pricing, and service quality to identify opportunities for fair pricing, product variety, and enhanced services.
e. **Development of a retail engagement strategy:** Identify risks, mitigation strategies, and Market Development Activities, including providing visibility to beneficiaries' needs and purchase behaviour, to support the scaling of CBT implementations and strengthen market capacity.
f. **Evaluation of existing market-driven humanitarian interventions:** Assess the effectiveness and impact of cash-based interventions on market functionality and explore possibilities for scaling up or initiating new interventions.

3. Methodology

The assessment employed a mixed-method approach, seamlessly integrating both quantitative and qualitative data collection techniques. Data collection took place during the timeframe of 23 July to 3 August 2023. The selection of markets was executed through purposive sampling, and subsequent quantitative and qualitative surveys were conducted across the following markets:

Sl.	Bhasan Char	Noakhali (MFI Only)	Hatiya (MFI Only)	Sandwip (MFI Only)
1	Cluster 5 Rohingya Bazar	Chairman Ghat Bazar/ Janata Bazar	Afazia Bazar	Akbor Hat Bazar
2	Section 19 Bazar	Chowmohuni Bazar	Jahajmara Bazar	Baten Market
3	Ghat Bazar (Number 1 and Number 2)	Maijdi Bazar	Ochkhali Bazar	Shiber Hat

Table 1: Selected Marketplaces in Bhasan char, Hatiya and Sandwip

This comprehensive selection spanned key markets across Bhasan Char, Noakhali, Hatiya, and Sandwip, thereby ensuring a comprehensive geographical representation that reflects diverse market dynamics and underscores the significance of the supply chain to Bhasan Char. Notably, the surrounding markets in Noakhali, Hatiya, and Sandwip were assessed exclusively for Market Functionality Index (MFI), using quantitative data collection methods. Traders were selected for the survey based on their product groups—cereal, non-cereals, and non-food items (NFIs)—and business sizes (small, medium and large). Wholesale traders were included where applicable to enhance insights. Two market-level surveys were conducted per marketplaces by the team leaders.

Four Focus Group Discussions (FGDs) were conducted, structured around the following criteria:

- Male, E-Voucher Beneficiary, comprising a mixed age group.
- Female, E-Voucher Beneficiary, consisting of a mixed age group.
- Male, Commodity Voucher Beneficiary, encompassing a mixed age group.
- Female, Commodity Voucher, involving a mixed age group.

Furthermore, two Key Informant Interviews (KIIs) were carried out. These interviews engaged one governmental official and one Rohingya majhee.

Markets	Trader Survey	Market Survey	Qualitative Survey (FGDs and KIIs)
Noakhali	72	6	0
Bhasan Char	62	6	6
Sandwip	72	6	0
Hatiya	72	6	0

Table 2: Sample size distribution among different markets

Additionally, qualitative data from Chattogram hub markets were seamlessly integrated, drawing from a previous joint RAM and Supply Chain Assessment.

4. Bhasan Char Markets Structure and Characteristics

Cluster 5 Market

Located adjacent to Cluster 05 and the fresh vegetable market, this marketplace plays an important role for Rohingya shoppers. Established after the relocation of Rohingya people in late 2020, it now features 117 shops, with 104 fully operational. The shops, not exceeding 6x7 feet in size, are made with temporary structures like bamboo and wood. These small shops, primarily constructed by the Rohingyas themselves, cater mainly to non-food items like clothes, shoes, electronics, and cosmetics, making it a key destination for Rohingya shoppers, especially Rohingya women. The Market Committee, consisting of 4 Rohingya traders with equal authority, oversees its operations, although Rohingyas in this market primarily rely on Bangladeshi traders as their main source of supply, often sourcing from 1 & 2 Number Ghat Bazar.

Cluster 5 Fresh Food Corner

Within this market, 15 shops actively participate in the WFP E-Voucher program. These shops, primarily run by Bangladeshi vendors, are housed in a permanent concrete structure (fresh food pavilion). Each vendor operates within a 6x6 feet concrete area, partitioned by 4-feet high square borders. Among the 15 running shops, 7 are vegetable, 3 fruit shops, 5 poultry vendors, and 2 shops selling beef/goat products on a weekly basis. Additionally, there are petty traders around the market selling vegetables and fruits. Notably, 3 Rohingya traders sell fish caught from local water reserves and canals. Some traders in this market supply wholesale vegetables to Section 19 Bazar. Prices are managed by 10 Bangladeshi Market Committee members, and the customer ratio stands at 20:80 (Bangladeshi vs. Rohingya) according to the traders. Setting up shops here requires permission from the Project Director (PD) of Navy.

Shohida Enterprise

This shop serves as the sole WFP E-Voucher transaction point in the vicinity of Cluster 5 market. Operated by the local chairman known as Chairman Ghazi, it stands as a concrete structure with a tin shed roof. During the survey, around 50 percent of the shop's space was allocated for WFP assistance items, including essentials like rice, oil, lentils, flour, salt, and sugar, while the remaining half was dedicated to Chairman Ghazi's own business, involving the sale of non-food items such as plastic furniture, cosmetics, clothing, shoes, and stationery. An extension project for the small warehouse behind the shop was underway to enhance its capacity. Notably, unlike Cox's Bazar, there was no waiting shed for beneficiaries here. However, the shop was equipped with two checkout points featuring POS machines for WFP beneficiary transactions. While a generator to ensure uninterrupted transactions was not present during the survey, the owner expressed intentions to install one in the future. No formal registration was required for this shop, but the owner pays BDT 8,000 as land rent to NAVY.

Section 19 Bazar

Inside the embankment, this is an emerging market adjacent to Rohingya Cluster 81. The majority of traders here are Bangladeshi, arriving from places like Hatiya, Sandwip, and Noakhali. They are attracted by the prospect of an increasing Rohingya population in Bhasan Char, the ease of conducting business, minimal security concerns, and affordable rent. The market is characterized by tin structures and consists of 17 shops, including 7 grocery stores, 3 restaurants, 1 mobile money shop, 1 salon, 1 workshop, 2 garment item shops, and 2 fruit vendors. Operating hours are typically from 7 AM to around 9-10 PM. The market is notably frequented by NGO workers for both meals and afternoon lunches.

Adjacent to this market, there is another informal open market, which predominantly deals in assistance items. This informal market usually becomes operational in the afternoon.

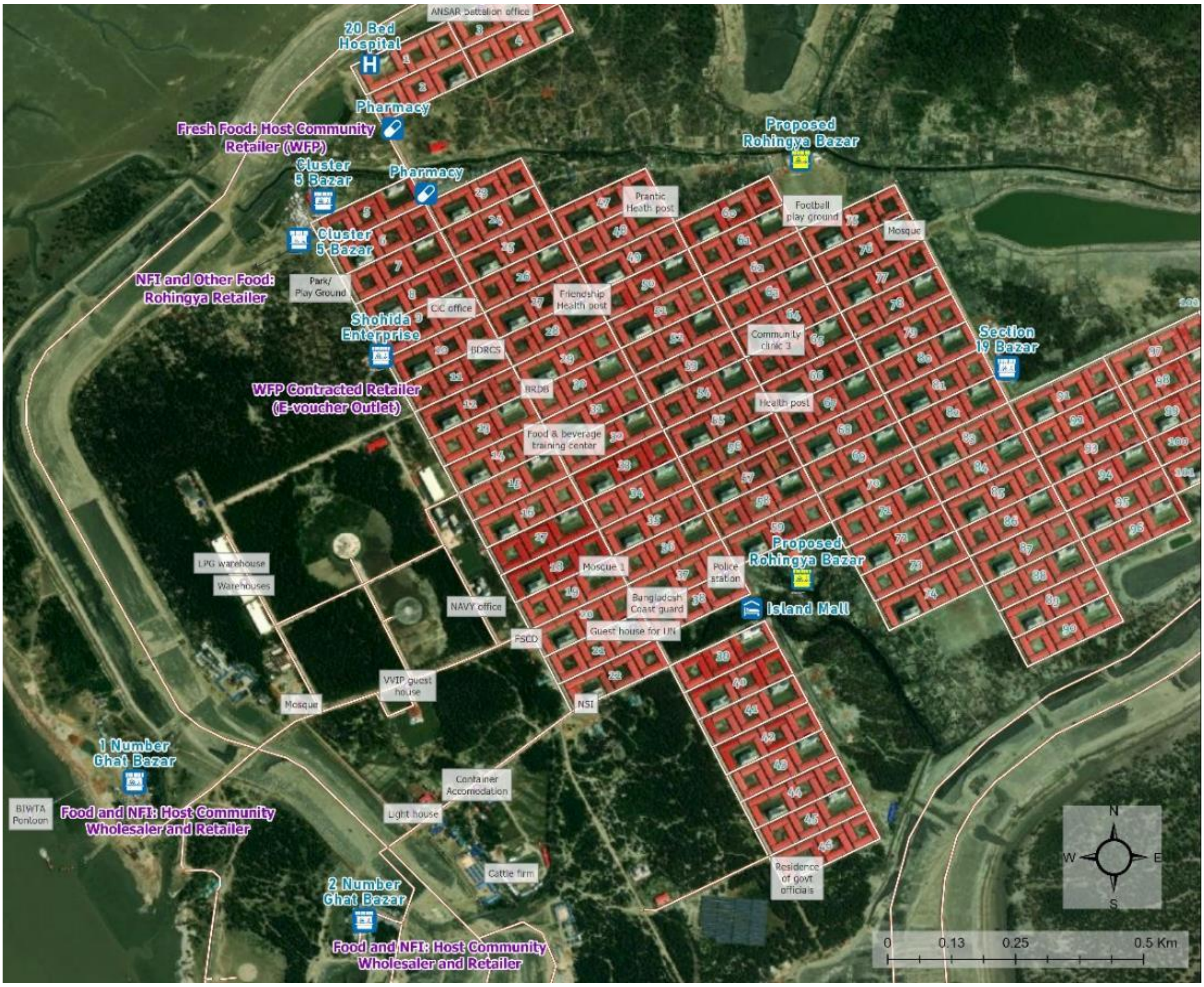


Figure 1: Map of Bhasan Char Markets

Number 1 & 2 Ghat Bazar:

Located outside the embankment near offloading sites, these two markets facilitate easy commodity transportation. These markets were established in 2017 to serve the laborers working on the embankment construction, but the number of operating shops has dwindled from nearly 200 to just 31, at the time of the assessment. Sales have significantly decreased due to the completion of construction work and the emergence of more accessible markets within the embankment. These markets include 8 grocery stores (offering non-food items as well), 6 poultry shops, 2 beef shops, 3 fish wholesalers, 5 tea stalls, 2 vegetable vendors, 9 hardware and repair shops, 3 restaurants, and 1 salon. These markets have limitations as they lack permanent concrete structures, making them susceptible to high tides and natural disasters. Rohingya refugees are not allowed to establish shops here since these markets fall outside the embankment. Most customers are NGO workers, and a few traders sell Non-Food Items (NFIs) to Rohingya traders in Cluster 5.

5. Existing market-based interventions in Bhasan Char

WFP introduced fixed commodity vouchers on Bhasan Char in March 2022, transitioning to e-vouchers in December 2022. The shift was initiated as a pilot program, aiming to enhance beneficiary choice and dignity. Under the E-Voucher system, beneficiaries receive a monthly value voucher of USD 15 per person. This empowers them to engage in personalized, dignified shopping experiences, choosing from a variety of items at WFP-contracted retail shops and the local vegetable market.

Crucially, this transition was carefully managed to avoid disrupting the island's natural market supply chain. Approximately 30% of beneficiaries have transitioned to e-vouchers, while the remainder continues to receive fixed commodity baskets monthly. This dual modality approach ensures a steady provision of essential goods, maintaining food security during Bhasan Char's transformative process. It also aligns with WFP's commitment to continually innovate and adapt to better serve vulnerable populations in humanitarian settings.

5.1. Commodity voucher model:

The Commodity Voucher Model involves the distribution of a fixed food basket through NGOs, managed and tracked digitally via Building Blocks. Cooperative partners, such as Islamic Relief Bangladesh (IRB), ensure the delivery of commodities in accordance with monthly targets, maintaining WFP standards.

Sl	Name of the Items	Unit	Quantity per unit/person/month
1	Rice (Atap, BRRI 29 Long grain)	Kg	13
2	Lentil (Moshur Dal)	Kg	1
3	Soyabean Oil (Plastic Bottle)	Ltr.	1
4	Refined Salt	Kg	0.50
5	Refined Sugar	Kg	0.50
6	Onion (Deshi, Medium Size)	Kg	0.50
7	Garlic (Medium Size)	Kg	0.10
8	Potato	Kg	1.00
9	Whole Dried Red Chili (Deshi)	Kg	0.25
10	Whole Turmeric (Indian)	Kg	0.05
11	Dry Fish (Churi)	Kg	0.30
Total			18

Table 3: Commodity Voucher Food Basket

5.2. Value voucher Model:

In the Value Voucher Model, WFP provides a standard monthly value voucher of USD 15 per person. Beneficiaries can redeem fixed commodities (e.g., rice, oil, lentils, salt, sugar) from WFP-contracted retailers. Additionally, they can exchange these vouchers for flexible items like fresh vegetables, fish, chicken, and perishables from small traders in the existing market in the island. WFP partner NGOs engage with these traders, ensuring the quality, operational standard and other capacity building support and overseeing the payment process on a weekly/bi-weekly basis.

Households receive value vouchers based on the transfer value per person (USD 15/person/month) multiplied by the number of household members, as per monthly UNHCR data. These vouchers are valid for 30 days and are activated in staggered cycles to prevent market rushes. The SCOPE system manages entitlement creation and payment files, while Building Blocks handles entitlement delivery, tracking, and reconciliation. The redemption network (where e-vouchers can be spent) includes WFP Retailers and Small Traders.

6. Bhasan Char Market Functionality Index (MFI)

The market assessment applied the Market Functionality Index methodology[1] which is a novel approach to market assessment by WFP. This approach which aims to quantify market functionality by returning a comparable score (out of 10) across marketplaces using a standard trader survey. These questions were organized under nine dimensions deemed crucial to make a judgement statement around market functionality.

The overall Market Functionality Index (MFI) score for Bhasan Char stood at 4.4, the lowest among the assessed surrounding markets. This marks a slight improvement of 0.2 points compared to the 2021 MFI score of 4.2 for Bhasan Char[2]. In comparison to the 2020, Cox's Bazar Ukhiya and Teknaf Markets Score (5.2),[3] Bhasan Char scored 1 point lower.

In comparison to 2021, the Bhasan Char Market has shown improvements in supply chain resilience and food quality dimensions, likely due to limited humanitarian interventions that encouraged diversified supply sources and enhanced stock capacity and food quality.

However, the price dimension performed 1.7 points lower than in 2021, mainly driven by rising food inflation and price volatility in the national market. Although the trader number significantly increases, the Competition dimension exhibited a decline in performance. This probably indicated potential monopoly tendencies among larger traders, especially with the reliance of growing Rohingya traders on a few Bangladeshi counterparts.

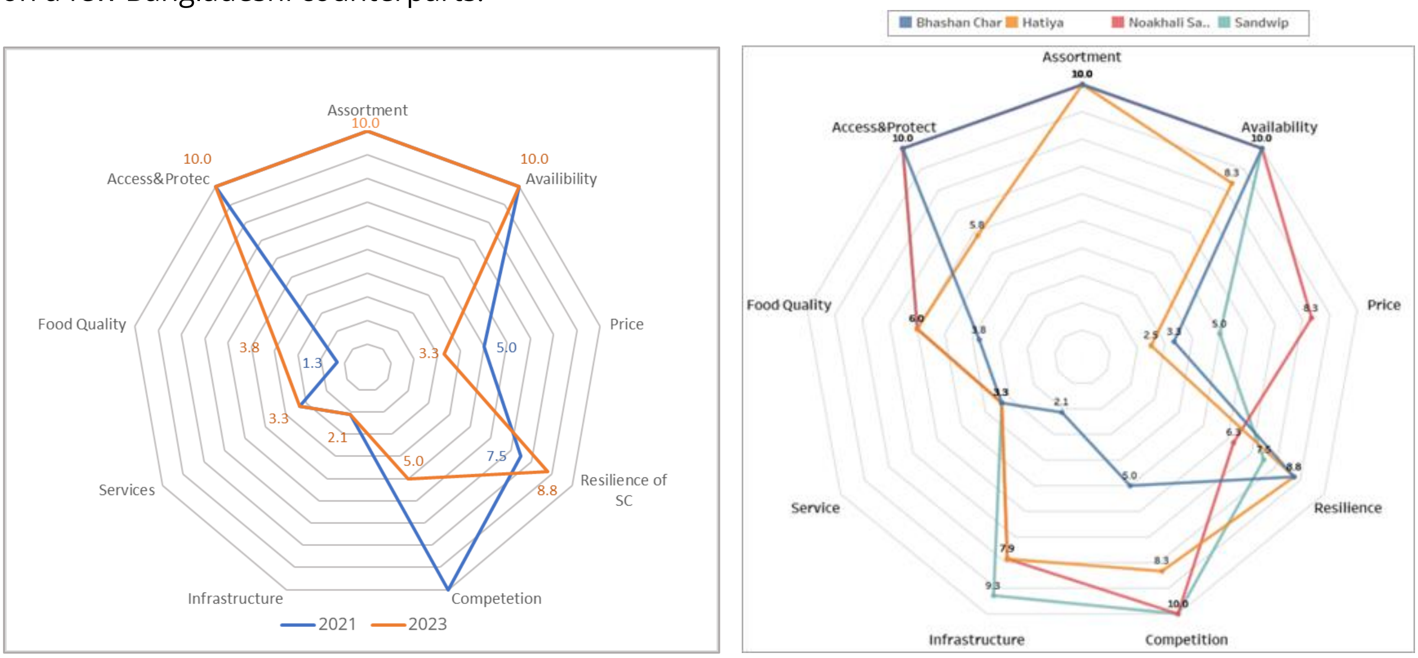


Figure 2: Bhasan Char MFI Score Comparison with 2021 (left) and Surrounding areas(right)

[1] MFI Guidance
[2] MFI Assessment Bhasan Char 2021
[3] MFI Assessment Cox's Bazar 2020

Ad..	Market..	Assessment Round	Risk level for market..	Assort..	Availabi..	Price	Resilien..	Competi..	Infrastr..	Service	Quality	AccessP..	MFI
Chit..	Bhashan..	2	High Risk	10.0	10.0	3.3	8.8	5.0	2.1	3.3	3.8	10.0	4.4
	Hatiya	1	Medium Ri..	10.0	8.3	2.5	8.8	8.3	7.9	3.3	6.0	5.8	4.9
	Noakhal..	1	Medium Ri..	10.0	10.0	8.3	6.3	10.0	7.9	3.3	6.0	10.0	5.9
	Sandwip	1	Low Risk	10.0	10.0	5.0	7.5	10.0	9.3	3.3	6.0	10.0	5.9
	Reg Avg.			10.0	9.6	4.8	7.8	8.3	6.8	3.3	5.4	9.0	5.3
		Average		10.0	9.6	4.8	7.8	8.3	6.8	3.3	5.4	9.0	5.3

Table 4: Market Functionality Index score of Bhasan char and surrounding Markets among different pillars in 2023

6.1. Assortment

The assessment of the market's assortment was based on its capacity to supply goods that could satisfy essential needs, ensuring minimum living standards. These needs encompassed food, shelter, basic household items, safe drinking water, sanitation and hygiene, and healthcare. Additionally, the breadth of the assortment was measured by stock-keeping units (SKUs).

Similar to 2021, Assortment dimension rated 10 points which indicates overall adequate assortment on Bhasan Char. However, abundance of cereal commodities was comparatively higher in Number 1, and Number 2 Ghat Bazar. These markets had only four traders selling essential food items. In the Rohingya section of the Cluster 5 Bazar and Section 19 Bazar resold assistance rice selling was prominent while few shops offering high quality rice sourced from commercial sources for the govt official and NGO workers. Notably, around 25 percent of Rohingya refugees primarily sourced their rice from the WFP-contracted retailer shop, Shohida Enterprise.

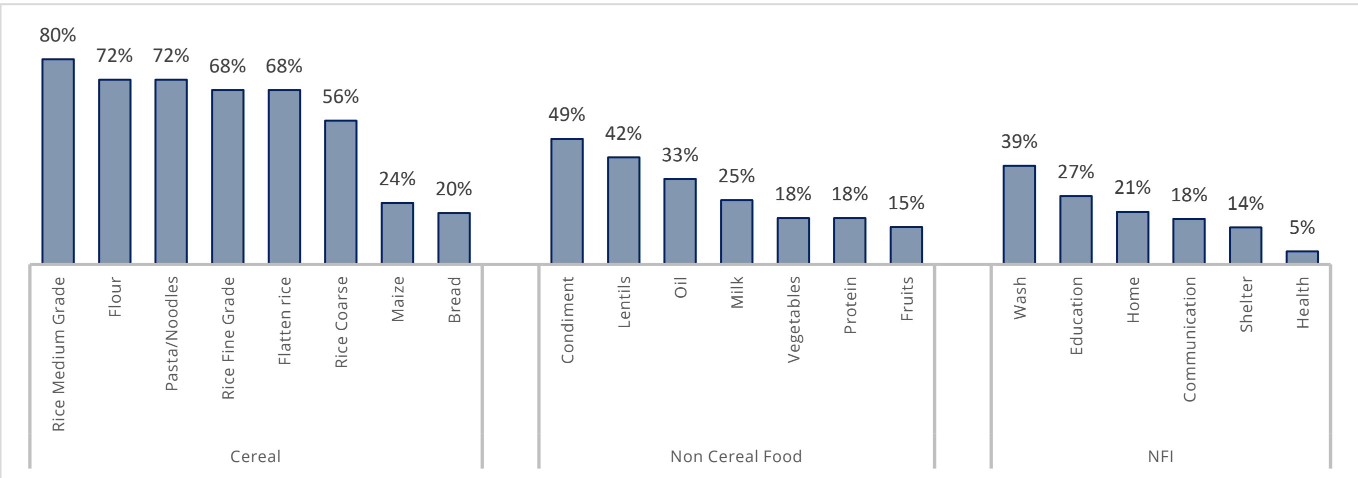


Figure 3: Assortment of Commodities in Bhasan Char

Regarding non-cereal food, a wide range of fresh vegetables was available, primarily in the Cluster 5 market where the WFP Fresh Food intervention (FFC) operates. Additionally, three shops in Section 19 Bazar were found selling fresh foods at a limited capacity. Resold assistance oil was observed in all markets except Number 1 and Number 2 Ghat Bazar. Beef, among protein items, was most abundant and available only in the Cluster 5 market (FFC) on a weekly basis. Also, there was an insufficient assortment of fruit items like apples and oranges on Bhasan Char with only two shops selling fruit items.

Most essential NFI items like drinking water, latrine construction materials, hygiene products (toothbrush, toothpaste, laundry detergent, liquid dish detergent, individual soap), shelter items (tents, plastic sheeting, metal sheet etc.), cooking and eating utensils, LPG, school material (notebooks, stationary), mobile phones/SIM cards, electronics and electric appliances, stoves, fuel and lighting were adequately available in Bhasan Char. However, health items were abundant in the island with only 2 dedicated over the counter pharmaceuticals shops.

Compared to surrounding markets, traders in Bhasan Char offered fewer choices in terms of stock-keeping units (SKUs), with only 18 percent of traders offering more than 200 items in various brands, colors, weights, shapes, and sizes. In contrast, around 40 percent of traders in adjacent markets offered more than 200 SKUs. This suggests a need for diversifying and expanding the product offerings in Bhasan Char to meet the demand for a wider variety of goods. This disparity in SKU offerings could be indicative of a more constrained market in terms of product diversity. Factors such as transportation challenges, unpredictable weather conditions, infrastructure and storage limitations might contribute to this discrepancy.

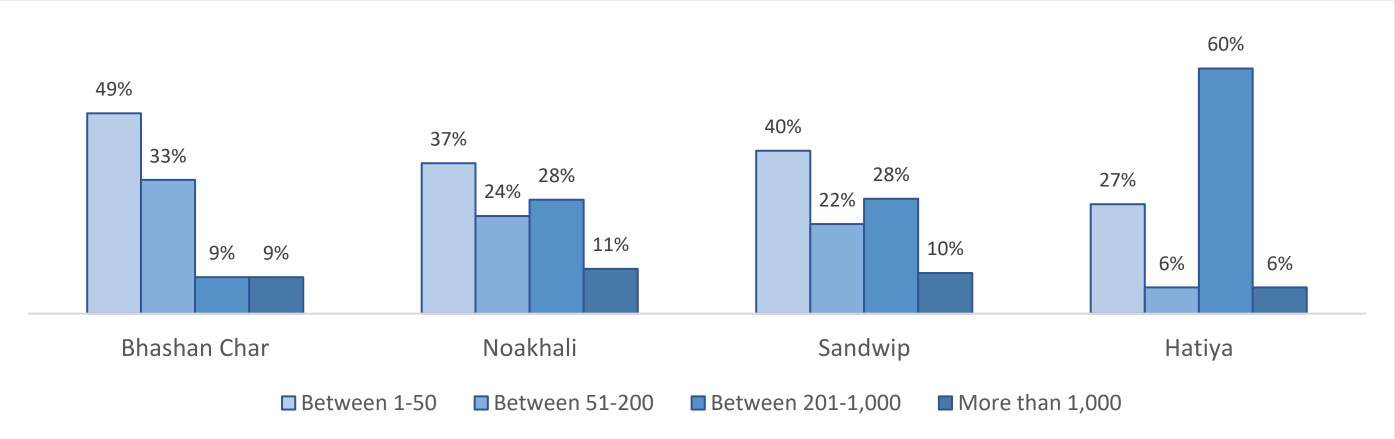


Figure 4: SKU comparison between Bhasan Char and adjacent markets

6.2. Availability

Availability dimension implicitly gauges traders' perceptions regarding product scarcity and the likelihood of running out of stock within a week.

In Bhasan Char's markets, Availability emerged as a minor concern, scoring the highest on a scale of 0 to 10. Only 12 percent of traders reported shortages in cereals, 29 percent in non-cereal food, and 22 percent in Non-Food Items (NFIs). This suggests a generally adequate supply relative to typical demand. Furthermore, only 9 percent of cereal traders and 16 percent of non-cereal traders expressed concerns about running out of stock within a week, primarily citing weather-related worries.

These findings imply that, during the assessment, traders held confidence in their ability to meet ongoing demand without fearing stock shortages. This confidence stems from the local Bangladeshi traders' extensive knowledge of established water supply routes to Noakhali, Hatiya, and Sandwip, enabling them to restock within 2-3 days when necessary. Notably, among the reported scarce commodities, fruits like apples, oranges, as well as freshwater fish and dried fish were most prominent.

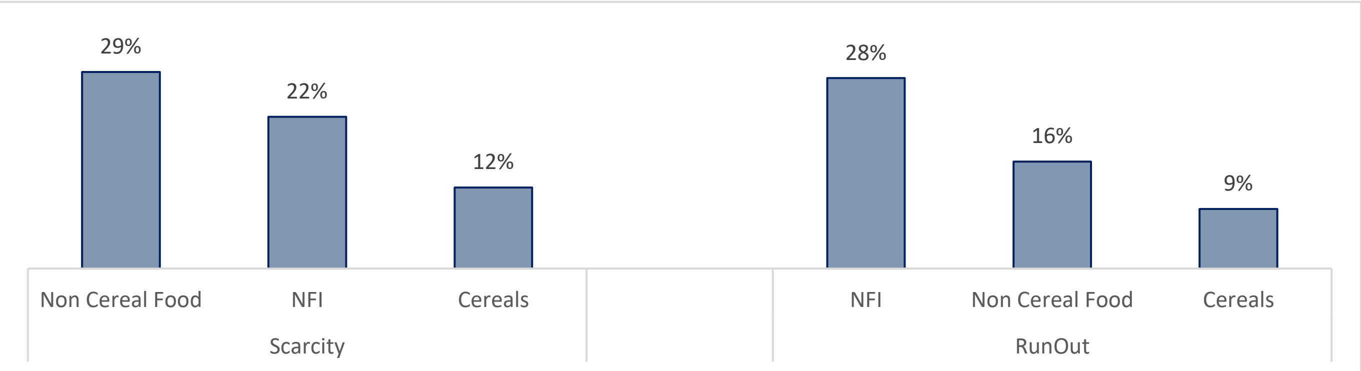


Figure 5: Percentage of traders reporting Scarcity of products and running out of stocks within 1 week

6.3. Price

The price dimension assesses price trends which is associated with affordability and volatility associated with stability & predictability. In 2023, the Price dimension demonstrated a notable reduction in performance, obtaining a score of 3.3, which is 1.7 points lower than its 2021 score of 5. This decline in Price performance cannot be solely ascribed to the Bhasan Char market, but instead is reflective of the nationwide increase in food inflation and price volatility.

Among the surveyed traders, a significant 63 percent reported price increases in non-cereal products, while roughly 40 percent noted price hikes in cereals and non-food items (NFIs) within the 30 days preceding the survey. Price volatility was a major concern, with approximately 85 percent of traders expressing apprehensions about NFIs and cereal prices, and 66 percent struggling to forecast the prices of non-cereal products.

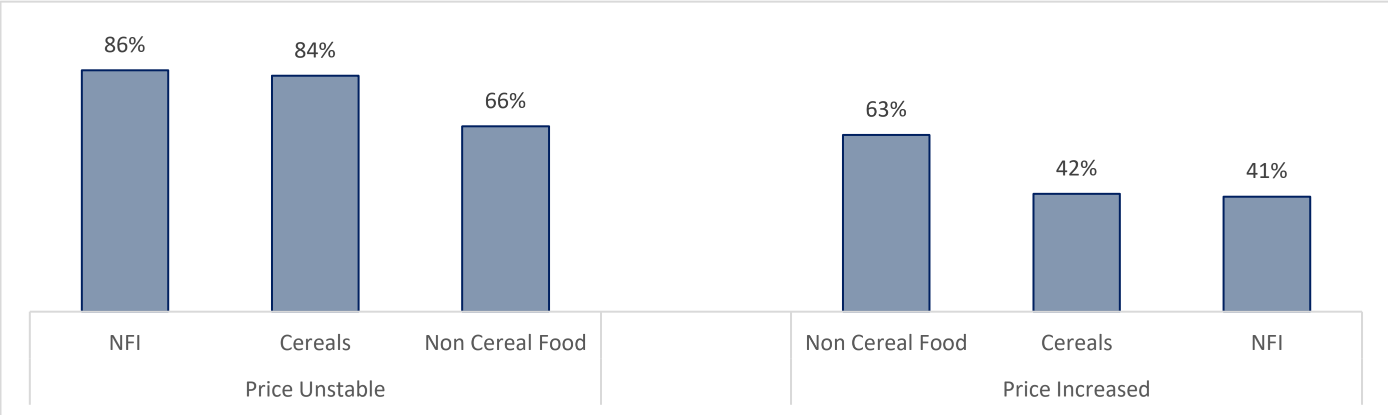


Figure 6: Percentage of traders reporting price volatility

Specifically, Traders reported a price increase in cereals, rice, flour, and non-cereal items like garlic, potatoes, sugar, eggs, chicken, dried red chili, tomatoes, carrots, onions, apples, and malta in the 30 days prior to the assessment. Among NFIs, items clothing, shoes, laundry and liquid dish detergents, household utensils, sanitary napkins, bathing soap, blankets, hygiene and sanitation items, such as water purification tablets, toilet paper, floor mats/mattresses, mosquito nets, and educational materials like schoolbooks and stationery, exhibited the highest levels of price volatility.

A comparison of E-Voucher shops food commodity prices with those in Cox's Bazar reveals an average of 11 percent higher prices in the Bhasan Char. In the context of local markets, this price difference was upto 18 percent. This comparison excludes resold assistance prices, which were available at a slightly cheaper rate (10 percent lower) in Bhasan char. Traders attribute this price differential to increased transportation and handling costs, the absence of in-house agricultural production, and seasonal adverse weather conditions.

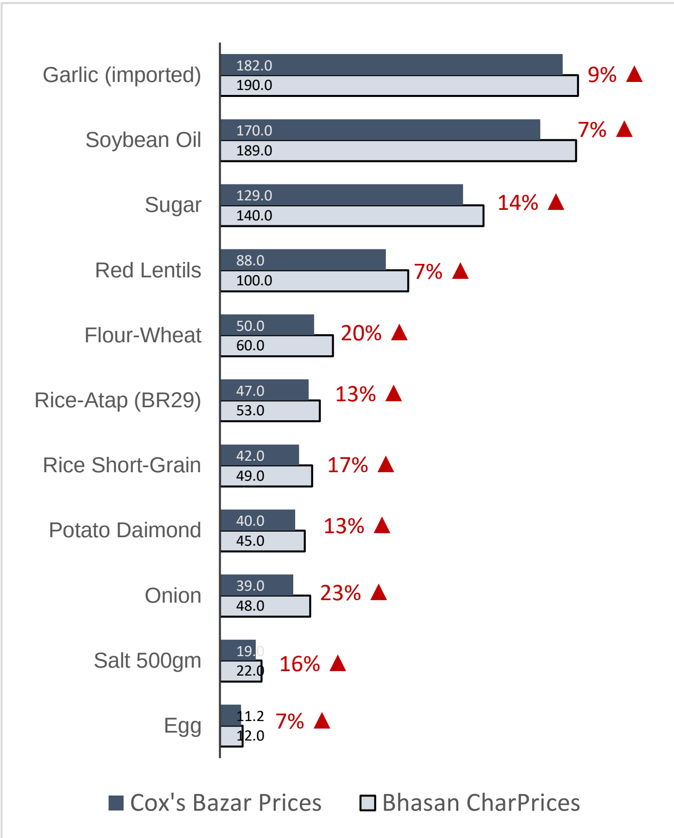


Figure 7: Cox's Bazar vs Bhasan Char price, July 2023

A considerable number of Rohingya traders in Cluster 5 and Section 19 Markets depend entirely on Bangladeshi traders from outside the embankment (1 & 2 number Ghat Bazar) for essential non-food items (NFIs), snacks, pickles, cigarettes, betel leaves/nuts, which are in high demand. Given the limited competition, these traders exploit their advantageous position by increasing product prices to maximize profit margins.

6.3.1. Price-setting mechanism

The determination of prices in Bhasan Char elicited mixed reactions. Traders of the market committees, played a significant role in setting commodity prices, taking into account factors such as transportation costs and price trends on the mainland on daily basis specially for the Bangladeshi section of Cluster 5 market. Seasonal variations, especially those imposed by the monsoon season, are also considered in price determination.

Notably, there was no strict pricing guideline available for traders. The Noakhali magistrate, responsible for addressing trader misconduct or collusive practices, irregularly visited Bhasan Char due to their broader responsibilities covering the entire Noakhali district. Additionally, some oversight on prices was exercised by humanitarian agencies, Camp in Charge (CIC), and the Navy.

6.3.2. Reselling of humanitarian assistance by beneficiaries

Beneficiaries in Bhasan Char actively partake in reselling humanitarian aid items, particularly staples like rice, oil, lentils, and sugar. These items are often resold for cash or used in barter trade, with resale prices significantly lower than prevailing market rates. For example, rice is typically resold at Tk 20-23 per kg, compared to the retail prices of BDT 45-50 per kg in nearby areas. Similarly, beneficiaries resell oil at Tk 120-127 per liter, well below the retail price of BDT 175-188 per liter. Facilitating these transactions are door-to-door buyers, enabling beneficiaries to allocate the proceeds for various needs, including medical expenses, purchasing vegetables, snacks, entertaining visiting relatives and meeting essential and emergency needs. These resold items are primarily channeled through small shops, predominantly in Section 19 and Cluster 5 Bazar, where prices are often discounted by 10-20 percent compared to regular market rates.

Interestingly, the introduction of the E-voucher modality has intensified the practice of bartering among beneficiaries according to the qualitative assessment. Among the 75 percent of Rohingya beneficiaries who receive commodity vouchers, the majority utilize barter mechanisms to acquire fresh foods, eggs, fish, meat and other essential food items. This approach enables beneficiaries to diversify their diets by exchanging commodities for foods that are not included in the standard assistance packages.

6.4. Resilience of the supply chain

The resilience dimension evaluates supply chains' responsiveness and its vulnerability to shocks. Regular supplies meeting changing demand and resilient to disruptions are vital to market functioning.

Despite its remote island location and multiple transport restrictions, in resilience dimension Bhasan Char scored a commendable 8.8 compared to 7.5 in 2021. Traders claimed high responsiveness to acute shocks (i.e., being able to replace lost stocks quickly) and lower lead time for stock replenishment from the mainland, which indicates high resilience. Most large traders reported they can restock within 2-4 days indicating strong supply chain capacity. Small shop owners showed lower lead time than moderate shop owners possibly indicating a higher level of dependency and confidence in the larger shop owners within the island.

On Stock Capacity over 80 percent of the big traders reported their current stock will last more than a week while around 40 percent of small and medium shop owners expressed concerns that their stock would not suffice for a week. Bangladeshi traders of Fresh Food Corner reported they replenish their stock every 2-3 days as no proper storage system available for the perishable product they sell. This highlights the necessity for improved stock management and the development of suitable warehouse and storage facilities on the island.

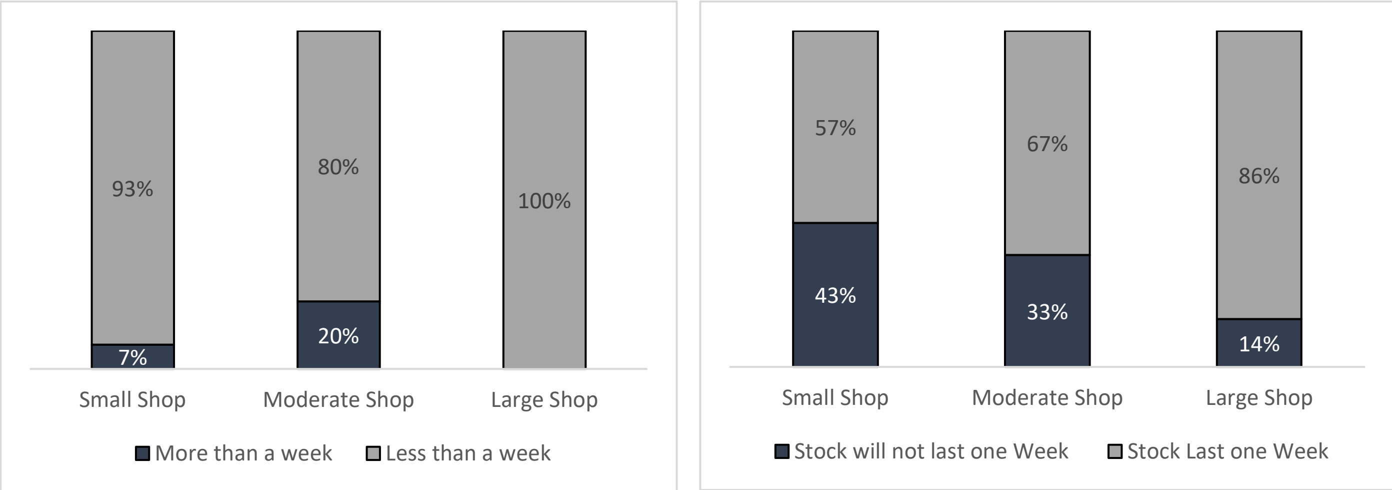


Figure 8: Lead time to restock (left) and Stock capacity with current demand (right) of traders in Bhasan Char

6.4.1. Commodity Sources

As an embryonic island with almost no commercial productivity, Bhasan char, relies entirely on the neighboring mainland for the supply of essential food and NFI items. Among the adjacent regions, Chattogram and Noakhali serve as primary sources, with significant traders, capable of bulk purchases, favoring Chattogram, while smaller capacity traders predominantly depend on the Noakhali market for their supplies. Some traders in Hatiya and Sandwip also procure a limited quantity of commodities locally. In contrast, Rohingya traders solely depend on Bangladeshi traders on the island and assistance commodities for their sourcing needs.

Regarding food items, most traders (53 percent) procure rice from Chattogram Hub markets, while a substantial number (47 percent) source rice from Noakhali.

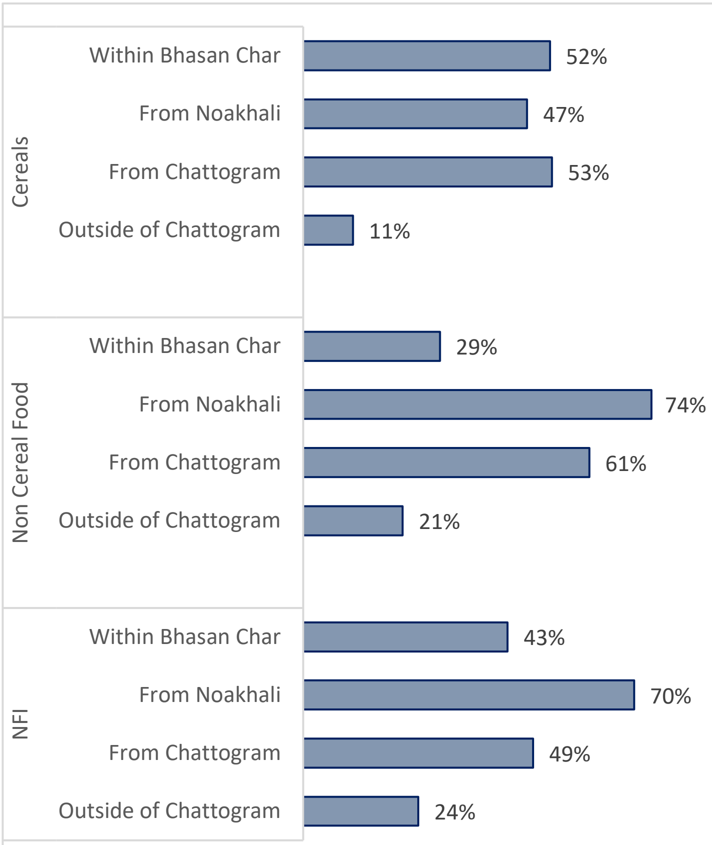


Figure 9: Commodity Sourcing in Bhasan Char

The 52 percent of the traders who sourced cereal commodity within the island is mostly small Rohingya traders purchasing rice from big wholesalers and assistance rice. On the other hand, for Non cereal food and NFIs over 74 percent source it from Noakhali and 55 percent from Chattogram. A minority of traders (18 percent) reported acquiring specific commodities from outside of the Chattogram region.

In terms of MFI scoring, Bhasan Char performs well in Node complexity, indicating multiple suppliers, and Node criticality, reflecting limited reliance on a single trader. However, there is room for improvement in Node Density concerning the geographical distribution of suppliers for cereal and NFI commodities.

		Node Complexity			Node Criticality			Node Density		
Adm1Name	MarketName	Cereals	Other Food	NFI	Cereals	Other Food	NFI	Cereals	Other Food	NFI
Chittagong	Bhashan Char	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Hatiya	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
	Noakhali Sadar	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
	Sandwip	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No

Table 5: Vulnerability of Supply Chain

6.5. Competition

The competition dimension evaluates if the number of traders in the market and the distribution of power among them guarantee a reasonable level of competition. Bhasan Char's MFI score of 5 out of 10 was lower than its score in 2021. Although the number of Rohingya traders on Bhasan Char has increased threefold compared to 2021, their dependence on Bangladeshi traders with relatively shorter presence creates an unfair competition.

Additionally, challenges persist in specific product categories, such as beef, apples, malta, and essential health and education-related non-food items (NFIs). Here, the limited presence of less than five traders narrows consumer choices and competitive dynamics.

While healthy competition was evident in the WFP-intervened Cluster 5 Fresh Food Corner (FFC), the concentration of vegetable items primarily in one marketplace might limit growth to alternative vegetable markets, potentially affecting their overall accessibility to fresh food for the beneficiaries.

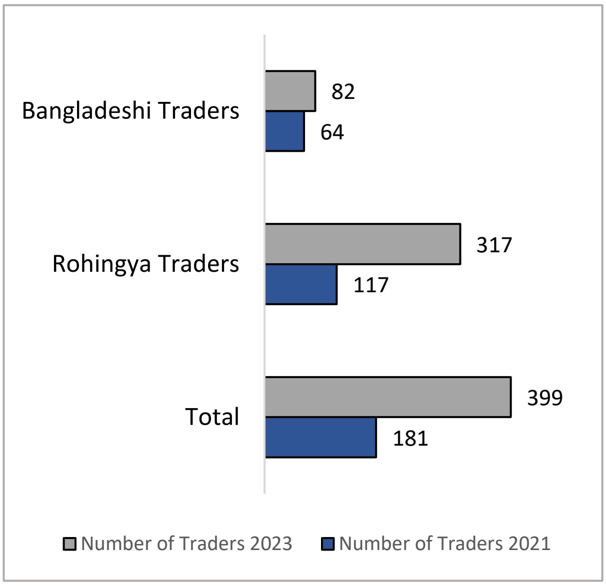


Figure 10: Traders numbers (approx.) comparison 2023 vs 2021

Additionally, under the WFP E-Voucher pilot program, the distribution of essential food items (excluding fresh food) primarily relies on a single retailer at the time of the survey. This pilot programme retailer benefits from a fixed 25 percent share of the Rohingya community's patronage, potentially creating a monopoly situation that could have negative long-term implications for market competition.

6.6. Infrastructure

The infrastructure dimension assesses the type and condition of the physical structures which host shops and markets in addition to sewage systems, electricity, or communication network. The infrastructure dimension is one of the worst performing dimensions on Bhasan char markets scoring only 2.1 out of 10.

Most shops on Bhasan Char are constructed using temporary materials, like bamboo, tarpaulin, iron sheets, and wood, except for the concrete structure of Cluster 5 Fresh Food Corner, which is around 6 by 6 feet with 4 feet high square borders. This structure allows for small storage in the shop. However, shops near the shore, such as 1 and 2 number Ghat Markets, are elevated but not sufficiently to withstand sudden water level rises during high tides, leading to disruptions in their storage facilities. The small size of these shops often results in mixed items being stored together, raising concerns, particularly for dried cereals, pulses, and other food items.

Compared to 2021, Bhasan Char's infrastructure has undergone some additions, such as a new marketplace (Section 19), a permanent jetty constructed by the Navy, a warehouse built for LPG storage and distribution, and a supermarket constructed by a prominent Chattogram businessman. It should be noted that during the assessment, the Navy jetty was not fully operational and only accessible for selected supplies determined by the Project Director. An established jetty specifically for cargo handling remains absent.

There is mobile and internet connectivity, as well as communal water and toilet services within a short distance. However, most market lacks crucial facilities such as a closed sewage system, waste collection points, and uninterrupted electricity. Consequently, operational market hours are limited, market toilets are not accessible to females and there is no lighting system in place, further impacting market activities.

Infrastructure

Features: The table below displays a Yes if the considered features are present in a market, a No otherwise. Conditions: The combination of "Yes", "No" attempts to give a description of the state of traders. As an example the combination "Yes", "No","No" (Order matters!) can be interpreted as the best one as it depicts a market where all stores are in an excellent condition.

		Conditions			Features						
Adm1Name	**MarketName**	Good	Medium	Poor	Closed sewage sys..	Network	Shelter	Toilet	Walkaways	Waste Collection ..	Water
Chittagong	Bhashan Char	No	Yes	Yes	No	No	No	Yes	No	No	Yes
	Hatiya	Yes	No	No	No	Yes	No	Yes	No	Yes	Yes
	Noakhali Sadar	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
	Sandwip	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes

Table 6: Infrastructure Conditions and Features

6.7. Services

6.7.1. Customer service

In the services dimension, which assesses the overall customer shopping and check-out experience, Bhasan Char scores only 3.3, which is the same as the score in 2021.

One noteworthy observation is the absence of certain conveniences in most marketplaces, such as issuing receipts, enabling remote purchases, and displaying price tags. The exceptions are the E-voucher shops, where automated receipts are provided to customers, and all prices are listed in whiteboard upfront.

Although Rohingya beneficiaries on Bhasan Char don't face restrictions visiting other markets, they are typically confined to a single contracted shop and 16 fresh vegetables vendors for majority of their food needs. While check-out times are generally efficient, taking no more than 10 minutes, payment options for Rohingyas are restricted to voucher or cash. In contrast, Bangladeshi customers have a broader array of payment methods, including cash, mobile money, and phone-based transactions.

The market landscape also lacks diversity in check-out points, with nearly all shops featuring just one. Admittedly, this is a common scenario in many shops throughout the country, except for advanced super shops. Furthermore, none of the shops except for WFP-managed distribution points in Cluster 5

FFC and Shohida Enterprise possess point-of-sale (POS) machines. This highlights potential areas for improvement in enhancing the overall customer shopping and check-out experience.

6.7.2. Financial Services:

Bhasan Char operates without a formal banking system. Traders rely heavily on hard cash or agent mobile banking to facilitate their transactions for business operations. Traders from neighbouring areas often collaborate with mainland relatives for sourcing commodities. However, the island has only five mobile banking points, exclusively accessible to Bangladeshi residents of the island. While some refugees can receive remittances from abroad through these mobile banking outlets, the majority of Rohingya face barriers to direct use due to the national ID requirement, which they do not possess. Credit purchase was strictly not an option for Rohingyas living in Bhasan Char. This underscores the necessity for more inclusive financial services on the island.

6.8. Food Quality

The quality dimension assesses food safety against key principles of hygiene and cleanliness, material separation, temperature control and stock management. Bhasan Char scored poorly with just 3.8 out of 10 but showed a slight improvement from the previous year's score of 1.3 due to limited humanitarian market intervention.

The assessment revealed inadequate protection of food items from pests and contaminants. Several shops had issues with rodents and leaking roofs, with some food items placed directly on the ground and exposed to direct sunlight. In the Fresh Food Corners, cleanliness and separation from poultry were found lacking due to structural constraints. Additionally, a majority of goods lacked clear "best-use-before" or "use-by" dates, and during the rainy season, food quality was at high risk due to wet and flooded conditions. Overall, most visited shops failed to meet minimum food safety, quality, handling, and storage standards.

6.9. Access

6.9.1. Physical access

In the access and protection dimension, Bhasan Char scored 10 points, the same as its score in 2021, according to traders. Rohingyas had relatively easy access to the island's markets. Cluster 5 market notably had a significant (60-80 percent) female customer base, while 1 and 2 Ghat Markets had fewer female customers (less than 20 percent).

While no major concerns for marginalized groups were identified, qualitative assessment revealed issues. Rohingya women expressed to encountered harassment in the markets during evenings, restricting their access. Due to limited livelihood opportunities, most men took on shopping responsibilities at the household level. Additionally, during the rainy season, beneficiaries faced difficulties reaching 1 & 2 Number Ghat Markets due to distance, bad roads, and transport limitations.

6.9.2. Monetary access

Rohingya refugees on Bhasan Char face limited income-generating opportunities, relying primarily on small cash-for-work activities, reselling humanitarian aid, and micro-scale personal production. The cost of the common tricycle van transportation, at 40-50 BDT one-way, proves unaffordable for most Rohingyas. While a few receive remittances from relatives in Cox’s Bazar and abroad via mobile money, they depend on the limited Bangladeshi mobile money vendors on the island for accessing these funds.

7. Logistic Infrastructure and Cost

7.1. Markets with Supply linkage to Bhasan Char

Bhasan Char, an isolated island in the Bay of Bengal, faces considerable challenges in sustaining its population's daily food and resource requirements due to limited local agricultural production. This prompts a heavy reliance on neighbouring markets to meet its essential needs.

Chattogram:

As the preeminent wholesale hub of the country, Chattogram assumes a pivotal role in Bhasan Char's intricate food supply chain. Its bustling markets offer a comprehensive array of household commodities, encompassing staples like rice, lentils, oil, and sugar. Chattogram's wholesale rice markets such as Chaktai, Khatunganj, Pahartoli Bazar, and Riazuddin Bazar are distinguished by their extensive variety and competitive pricing. Furthermore, Chattogram emerges as a substantial source of variety of fresh produce, poultry, and other perishable food items.

Noakhali:

The regular boat services connecting Noakhali to Bhasan Char significantly ease the transportation of goods, rendering Noakhali a critical source of provisions. The markets in Noakhali present a diverse range of products, with a pronounced emphasis on fresh foods and vegetables. Its proximity to Bhasan Char and cost-effectiveness renders Noakhali particularly suitable for smaller quantity purchases.

Hatiya:

Situated in relative proximity to Bhasan Char, Hatiya assumes the role of a secondary market, primarily supplying poultry, snacks, pickles and related products.

Sandwip:

While neighbouring the island, Sandwip's contribution to Bhasan Char's commodity supply remains modest. Nevertheless, traders who have relocated from Sandwip to Bhasan Char continue to engage in small-scale commodities sourcing from their erstwhile locale.

This intricate network of interconnected markets, facilitated by waterways underpins Bhasan Char's vital supply sources. While Hatiya and Sandwip offer supplementary support, Chattogram and Noakhali emerge as the principal pillars supporting the food procurement system on the island. This reliance on these key markets not only underscores the island's intricate economic interdependencies but also highlights the significance of these vital supply channels in upholding the food security of Bhasan Char's residents.

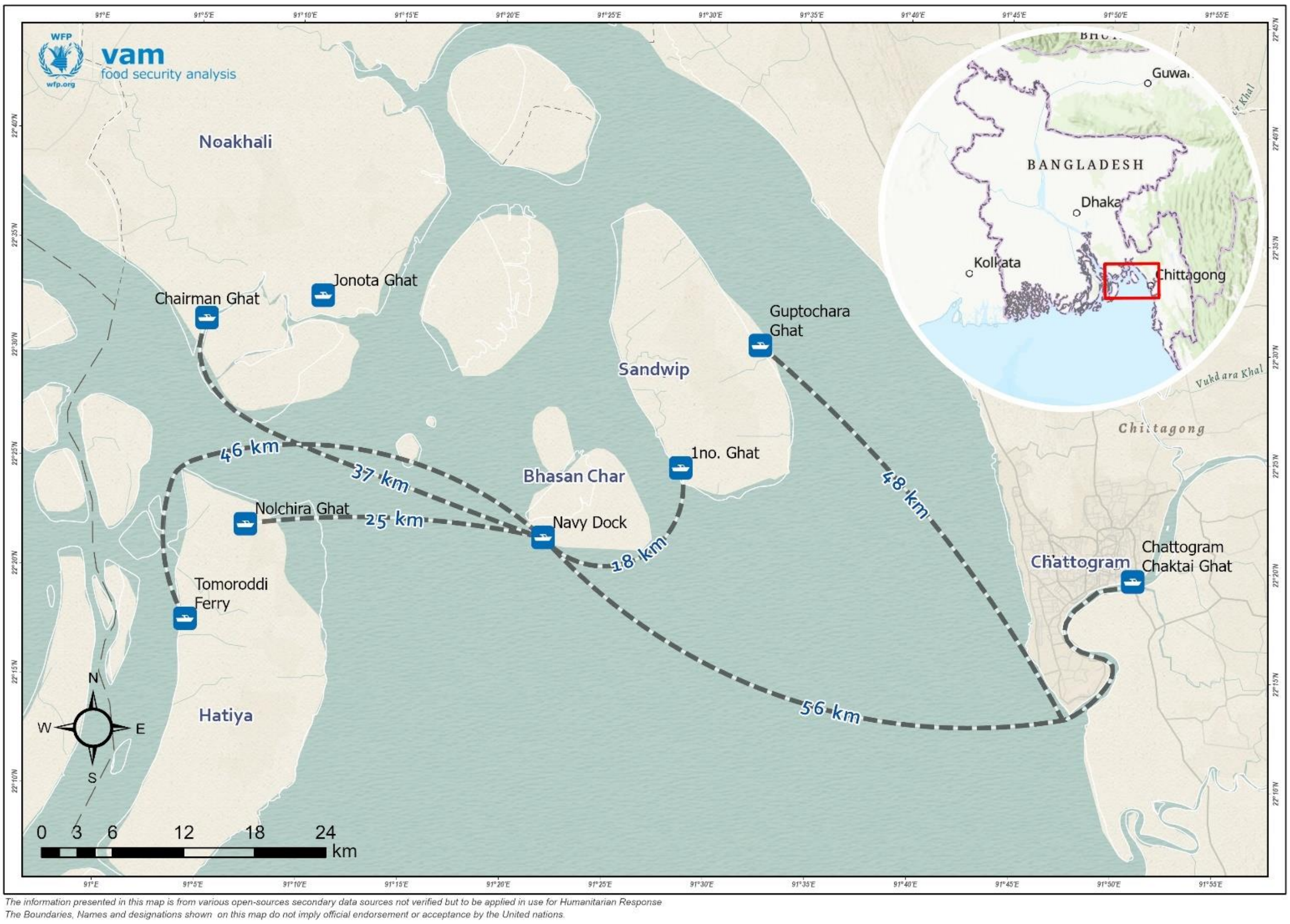


Figure 11: Map of Supply chain routes to Bhasan Char

7.2. Supply Routes and Cost mapping for Bhasan char Commodities

Most of the supplies for Bhasan Char are transported from Chittagong or Noakhali through the two main ghats, Chaktai and Janata Ghat.

7.2.1. Chaktai Ghat Chattogram:

Chaktai Ghat is a pivotal riverside location in Chattogram, serving as both a critical river port and commercial hub. It is intricately linked to the fishing industry, and the local fishermen's daily catches find their way to this ghat. Chaktai Ghat is also a vital conduit for trade and transportation between Chattogram and other regions of Bangladesh. Wooden boats and bulkheads are used to transport commodities to Bhasan Char from Chaktai Ghat. However, the absence of a well-established jetty at Chaktai Ghat necessitates manual labor and wooden decks for loading and unloading cargo, which highlights the inherent challenges of this process.

Traders in Bhasan Char prefer purchasing bulk quantities of rice, lentils, and oils due to the location's proximity to the country's largest wholesale hub markets, Chaktai and Khatunganj. The total cost for transporting grain-type commodities to Bhasan Char is BDT 2.4 per kg, while the cost for oil-type commodities is BDT 1.7 per litre.

Commodity Type	Loading Wholesaler (AVG)	Wholesaler to Chaktai Ghat Cost (AVG)	Transport Modality-1	Loading-Unloading Cost at Chaktai Ghat (AVG)	Chaktai Ghat to BC Cost (AVG)	Transport Modality-2 (AVG)	BC Loading/ Unloading (AVG)	BC Ghat to Retail Warehouse/Shop (AVG)	Transport Modality-3	Total Average Cost
Grain and Pulses (Rice, Lentils, Sugar) - 1Kg	0.1075	0.50875	Truck/pick up	0.4375	0.79	Trawler Boat	0.4	0.13	Tractor/ Van	**2.37375**
Oil - 1 Litre	-	-	Dealer Truck	0.40125	0.7675	Trawler Boat	0.4	0.13	Tractor/ Van	**1.69875**

Table 7: Supply cost breakdown from Chattogram

7.2.2. Chairman and Janata Ghat Noakhali:

Chairman Ghat and Janata Ghat play a crucial role in transporting goods from Noakhali to Bhasan Char. Local traders buy perishable items from markets in Noakhali and transport them to Bhasan Char on a daily basis. Janata Ghat runs a daily shuttle service that carries passengers and goods such as vegetables, chicken, and eggs, while Chairman Ghat has a sea truck that operates on Sundays and Thursdays, mainly focused on passengers' transportation. Large quantities of goods are transported using reserve boats from Chairman Ghat, and loading and unloading operations are done manually using wooden decks due to the absence of a well-established jetty. The dynamic challenges that traders face is highlighted by the constantly changing locations of these Ghats, particularly Janata Ghat due to river erosion. Manual labor and wooden decks are the only options for loading and unloading operations.

Transportation costs for various commodities from Chairman Ghat or Jonota Ghat to Bhasan Char are slightly higher than Chattogram. For grain commodities like rice and lentils, the average cost is BDT 2.9 per kg. For a cartoon box of oil transportation, the total cost is BDT 1.7 per litre. For eggs, the cost is BDT 0.4 per piece and for vegetables, the average cost is BDT 2.9 per kg.

Commodity Type	Loading Wholesaler (AVG)	Wholesaler to Jonota Ghat Cost (AVG)	Transport Modality-1	Loading-Unloading Cost Chairman/Jonota Ghat (AVG)	Chairman / Jonota Ghat to BC Cost (AVG)	Transport Modality -2 (AVG)	BC Loading/Unloading (AVG)	BC Ghat to Retail Warehouse/Shop (AVG)	Transport Modality-3	Total Average Cost BDT
Grain and Pulses (Rice, Lentils, Sugar) - 1Kg	0.108	1.113	Truck/pick up	0.340	0.840	Trawler Boat	0.400	0.130	Tractor/ Van	**2.930**
Oil - 1 Litre	-	-	Dealer Truck	0.340	0.130	Trawler Boat	0.400	0.130	Tractor/ Van	**1.710**
Eggs - 1 Pc	-	0.094	Truck/pick up	-	0.250	Trawler Boat	-	0.067	Tractor/ Van	**0.410**
Vegetables - 1kg	0.108	1.113	Truck/pick up	0.340	0.840	Trawler Boat	0.400	0.130	Tractor/ Van	**2.930**

Table 8: Supply cost breakdown from Noakhali

The role of Chaktai Ghat in Chattogram and Chairman-Janata Ghat in Noakhali is very prominent in securing the supply chain for Bhasan Char. Despite infrastructure challenges, these crucial connections stand as lifelines for the island's daily necessities. As Bhasan Char navigates its unique logistical landscape, efforts to enhance transportation and cargo handling infrastructure hold immense significance for the island's sustenance and growth.

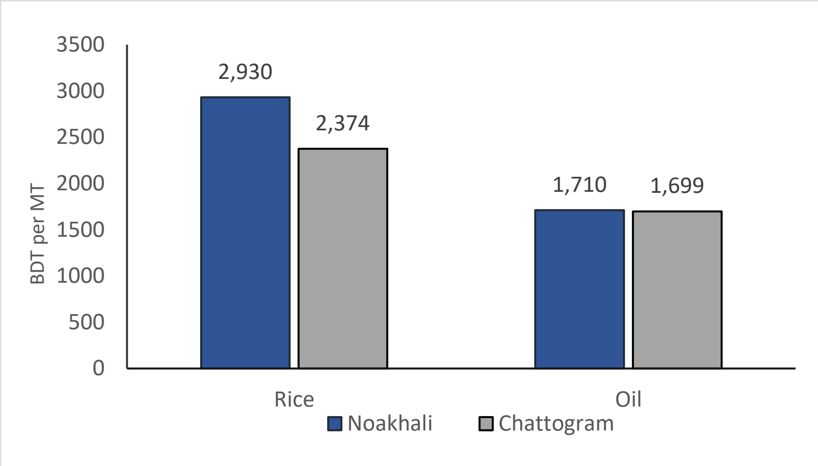


Figure 12: Logistics cost comparison (in Metric Ton)- Chattogram vs Noakhali

8. Resilience and risk mapping for CBT Operational Scale-up on Bhasan Char

Within the operational landscape of Cash-Based Transfer (CBT) activities on Bhasan Char, a multitude of challenges has been identified, notably constrained market access, potential monopolistic tendencies, and risks posed by extreme weather conditions. To bolster resilience, strategies involve increased government involvement in visit frequency management, fostering competition through introducing multiple retailers, proactive price monitoring, and addressing storage and infrastructure limitations. These multifaceted measures aim to fortify CBT operations amid the complex dynamics of this island setting.

Aspect	Risks	Risk Category	Mitigation Measures
Access to Bhasan Char	Limited access to Bhasan Char for humanitarian workers and stakeholders hinders CBT implementation and monitoring	High Risk	▪ Engage governmental bodies, CICs, Navy and other stakeholders in collaborative efforts to increase the frequency of visits to Bhasan Char, ensuring a more efficient flow of humanitarian resources and personnel. ▪ Collaborate with regulatory authorities to alleviate transport restrictions and promote equitable access for all stakeholders. ▪ Implement cost-sharing mechanisms among stakeholders to reduce transportation and handling costs, making access to Bhasan Char more sustainable. ▪ Promote cooperative transport arrangements to minimize waiting times for small traders, enhancing market dynamics and resilience.
	Restricted water transport regulated by authorities and monopolization by large traders disrupts supply chains.	High Risk	
Price	Prices are set by market committees with no functional control mechanism in place, leaving no room for negotiation, particularly for Rohingyas.	High Risk	▪ Implement proactive price monitoring considering scarcity, access restrictions, and transport costs and establishment and frequent review of Minimum Expenditure Basket (MEB). ▪ Collaborate with the Market Committee for price monitoring and assess the impact of prices regularly. ▪ Advocate for the establishment of an overarching trader committee with representation from both refugee and host community market committees to ensure better control over market activities and pricing. ▪ Encourage the display of Price Boards in each shop to enable price visibility and enhance market competition.
	Prices of NFIs could be raised by traders due to less competition and supply.	Moderate Risk	
	Reselling of in-kind food assistance to refugees	Moderate Risk	

Aspect	Risks	Risk Category	Mitigation Measures
	further depresses market prices.		▪ Promote government capacity-building efforts to enhance oversight and regulation of collusive or exploitative practices within the market, fostering price stability.
Assortment and Availability	Inadequate retail assortment of certain products (e.g., fruits, beef, dry fish etc.) limits consumer choices.	High Risk	▪ Collaborate with suppliers to diversify product offerings. Ensure a wider range of products in the market. ▪ Hybrid modalities to compliment the missing items. ▪ To mitigate the risk of monopoly in the Bhasan market for food items, implement a diversified retailer engagement strategy. ▪ Bringing in multiple retailers and create competitional environment for the food distribution outlets. ▪ Prioritize supply chain improvements, including restocking frequency and transportation capacity. ▪ Regularly review and adapt the operational plan based on available resources and market conditions. ▪ Address transport restrictions and ensure a consistent supply of basic items to prevent scarcity.
	A sudden scale-up of E-voucher operations without addressing supply chain constraints may lead to scarcity of basic food items.	High Risk	
	Monopoly risks in Bhasan market for food items may affect efficiency and product choices.	High Risk	
Supply Chain	Constraints in the supply chain, such as transportation costs and limited storage facilities, impact inventory control and availability.	High Risk	▪ Ensure predictable demand for WFP contracted retailers to enable advanced stocking. ▪ Increase diversified suppliers through Cash-based intervention activities to ensure a stable supply chain. ▪ Provide training and resources to small traders for efficient storage and inventory management. ▪ Facilitate coordination and information sharing among suppliers to streamline the supply chain. ▪ Establish livestock-based livelihoods to strengthen the supply chain. ▪ Implement vouchers with capped prices agreed upon with contracted retailers for food distribution. ▪ Enhance distribution frequency by staggering beneficiary groups receiving assistance at different times during the month. ▪ Introduce Cold chain storage/shelves through cash intervention activities to enhance food preservation. ▪ Establish Preferred Supplier Agreements (PSAs) or optimize the Fresh Food Supply Chain (OFFSC) ▪ Build capacity of small retailers to enable aggregate demand and improve information sharing to reduce supply chain costs.
	Long lead times for perishable items like vegetables from the mainland to the island.	Moderate Risk	
	Insufficient capacity of small traders to effectively manage storage and inventory	Moderate Risk	
	Limited availability of large boats compared to small wooden boats from Noakhali and Hatiya can lead to high wastage of fresh vegetable and chickens and eggs during transportation.	Moderate Risk	
Seasonal Factors	Monsoons, adverse weather, and cyclones damaging goods storage and transport to the island can disrupt the supply chain	High Risk	▪ Develop contingency plans for adverse weather conditions, including the pre-positioning of essential goods. ▪ Collaborate with transportation providers to implement safety measures during adverse weather. ▪ Utilize weather forecasting to anticipate disruptions and adjust logistics accordingly.
Financial Services	Refugees have less access to cash and income-generating opportunities compared to Cox's Bazar, limiting their financial resources.	High Risk	▪ Expand cash-for-work interventions to enhance the income and purchasing power of refugee families. ▪ Integrate humanitarian digital assistance transfer platforms with commercial FSP platforms. ▪ Advocate for humanitarian documents to be acknowledged as meeting financial service providers' KYC requirements, enabling refugees to access financial services. ▪ Scale up market-driven programming to supplement existing CBT and in-kind food assistance, gradually based on market responsiveness.
	Refugees lack KYC documents, preventing their access to digital financial services, which hinders their financial inclusion.	High Risk	

Aspect	Risks	Risk Category	Mitigation Measures
	Limited Financial Service Providers are present on the island, reducing options for financial services.	Moderate Risk	▪ Advocate for the expansion of financial service providers, such as agent banking and mobile money transfers
Capacity Building	Most traders opened shops due to available opportunities with no proper trading knowledge	High Risk	▪ Provide comprehensive capacity-building training to small traders on inventory management and business operations. ▪ Support traders in implementing effective bookkeeping and cost management practices to improve financial literacy. ▪ Facilitate knowledge sharing and collaboration among small retailers to enhance their trading capabilities.
	Small traders lack knowledge in bookkeeping records	Moderate Risk	
	Lack of coordination and knowledge sharing among small retailers	Moderate Risk	
Competition	Tensions may arise between host and refugee traders over business opportunities	High Risk	▪ Introduce an inclusive business model for both Bangladeshi and Rohingya traders, ensuring equitable opportunities for all.
Infrastructure	Poor market infrastructure, especially during the rainy season, hampers market functionality.	High Risk	▪ Collaborate with government and humanitarian organizations to improve market infrastructure, focusing on drainage, sanitary food disposal, disability-friendly walkways, and monsoon-resilient structures. ▪ WFP to build/rehabilitate market infrastructure or bring innovative approach like Retail in a Box (RIAB).
Storage and Quality	Lack of permanent storage and cold chain facilities impact food commodity storage and quality.	High Risk	▪ Facilitate storage construction and strengthen the capacity of small traders in storage management and food safety procedures. ▪ Advocate for self or business storage facilities supported by the government
Access to Markets	Limited access to shops outside the embankment.	Moderate Risk	▪ Establish safe and reliable transportation options exclusively for women to access markets. ▪ Implement awareness campaigns and community engagement programs to promote a safe and secure market environment for women. ▪ Initiate community-led lighting projects to install well-lit pathways from residential areas to the marketplaces.
	Due to the distance to some markets (like the ghat markets) and unavailability of stable electricity protection concerns for women may increase.	Moderate Risk	

Medium Risk = Markets can continue to function but at a lower scale without mitigating measures
High Risk = Market cannot function or cannot expand without mitigating measures

9. Bhasan Char Transfer Modality Cost Comparison

The cost analysis for Bhasan Char operations in June 2023 indicates that when considering WFP's total cost, the In Kind is the most cost-effective option, followed by the WFP E-voucher modality, with the Commodity Voucher being the most expensive. Although In kind is the most cost-effective option it restricts beneficiaries' freedom of choice. In contrast, value voucher is more cost-effective in terms of program administration because it reduces the need for warehousing, transportation, and distribution of physical goods. It also allows for lower overhead costs compared to commodity basket assistance. Furthermore, the cost-effectiveness of the Value Voucher could be further enhanced if WFP actively regulates retailer prices using the pricing mechanism from Cox's Bazar. Assumptions considered in this analysis include transportation costs, market-driven pricing for certain commodities, and specific contractual agreements between Corporate Partner IRB and its partners. It's essential to note that the cost structures for Value and Commodity Vouchers are aligned due to similar organizational structures and capacities.

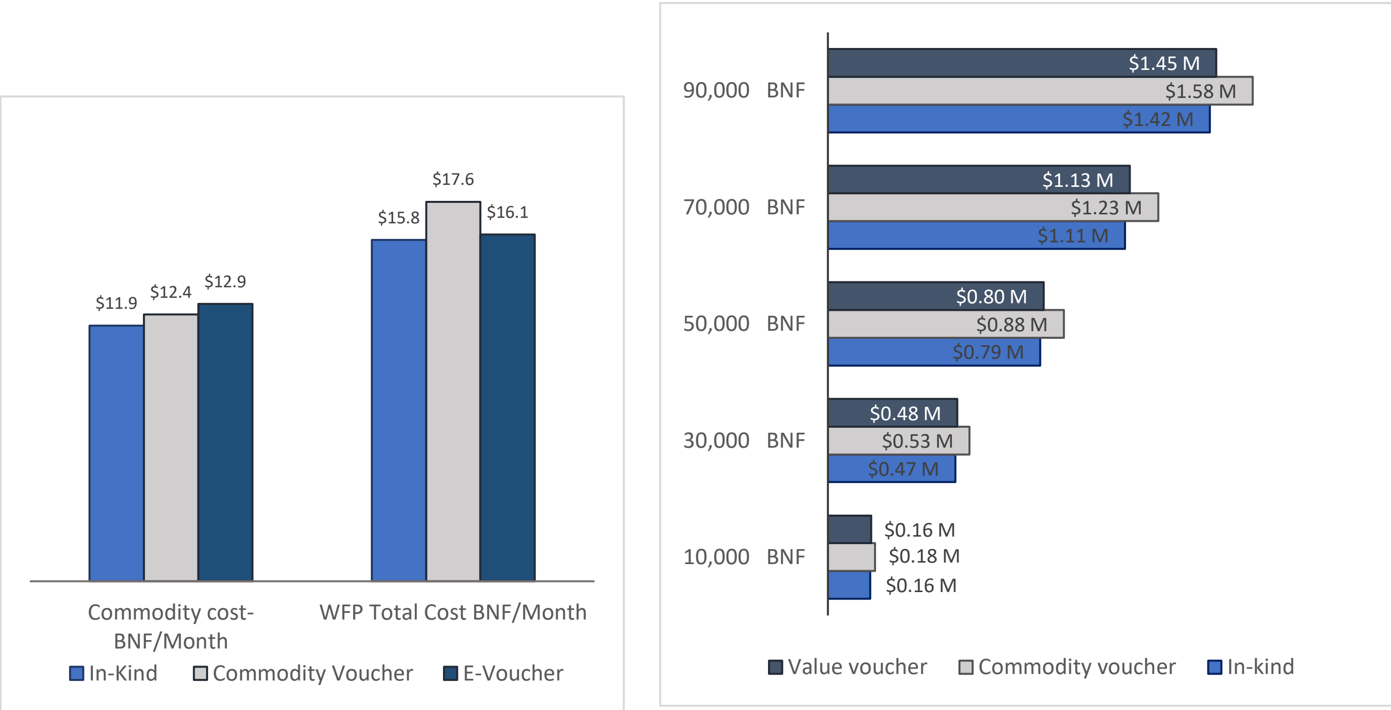


Figure 13: Monthly Assistance modality cost comparison (left) and Beneficiary target vs Funding (Right)

10. Overall Challenges for Market Based Intervention

The implementation of market-based intervention on Bhasan Char Island confronts an array of challenges, intricately interwoven with logistical, environmental, and operational factors. These challenges impede the effective delivery of humanitarian aid and the sustainability of programs, encompassing:

Limited Market Access: Geographical isolation, availability of seaworthy vessel and controlled transportation pose formidable barriers, hampering the movement of humanitarian actors, beneficiaries, and goods. This restriction complicates assessments, supply deliveries, and program oversight.

Infrastructure Deficiency: Inadequate market infrastructure, further exacerbated by the region's vulnerability to heavy rain, flooding, cyclones, and tidal surges, hinders market functionality. Urgent infrastructure development is imperative to withstand natural disasters and sustain trade.

Financial Service Gaps: Absence of physical bank branches and microfinance institutions limits financial transactions and credit support for traders, compelling reliance on mobile money with associated extra charges, which, in turn, affects product pricing.

Regulatory Framework: Stringent regulations enforced by the Navy, CiC (Camp in Charge), and the Market Committee pertaining to prices and transport add layers of complexity to market operations.

Rohingya Movement Uncertainty: The uncertain status of Rohingya relocation on Bhasan Char deters business establishment and investment, hindering market growth and economic development.

Demand Variability: Market demand fluctuates significantly, closely linked to beneficiaries' distribution cycles. This variability impacts the stability of market activities.

High Food Prices: Market actors contend with elevated food prices attributed to handling services, transportation costs, and restrictions on transport frequency.

Declining Sales: Markets near the offloading sites have seen a decline in sales due to the emergence of more accessible options within the embankment.

Space Constraints: Limited land space availability and the complicated & lengthy allocation process on the island give rise to supply and demand side constraints, affecting access, availability, and affordability of both food and non-food items.

Bartering Mechanisms: The prevalent bartering mechanism, especially for vegetables, protein sources, and LPG gas, introduces complexities in market transactions.

Entitlement Utilization: While all target beneficiaries can access commodity vouchers and E-Voucher services, there is a concern that some beneficiaries sell essential items like rice, oil, lentil, sugar and other food items to meet immediate needs, potentially affecting food security.

Price Discrepancies: Market dynamics exhibit significant price discrepancies, with some commodities being bought at a higher price than they are sold, adversely affecting traders' profitability.

11. Consideration for E-voucher Scale Up

11.1. Customer Behaviour/preferences

The qualitative assessment highlighted all Commodity Voucher beneficiaries expressed a clear preference for E-Voucher modalities. They emphasized that E-Vouchers offer greater flexibility and freedom of choice in their purchasing decisions. Although in Cox's Bazar they could access E-Voucher, commodity voucher in Bhasan char restricts them with less diversified food. They can't access basic items like vegetables, eggs, and protein items from Commodity voucher. A noteworthy finding was the strong preference for E-Vouchers among Rohingya women, particularly for blanket food assistance. They voiced concerns about cash assistance, often managed by male household members, who might allocate it toward non-essential items like cigarettes or betel leaves. Due to limited NFI assistance for Rohingyas, they tend to retain and use NFIs received as in-kind assistance in Bhasan Char rather than selling them.

An analysis of beneficiary transaction data from WFP building blocks indicates that Bhasan Char E-Voucher beneficiaries prioritize fresh food purchases to a greater extent than Cox's Bazar Rohingya beneficiaries. While Cox's Bazar beneficiaries allocated only 23 percent of their entitlement to fresh food, Bhasan Char E-Voucher beneficiaries spent nearly double that amount, at 43 percent (see Figure-14) in the month of June and July 2023. The prevalence of bartering among Commodity and E-Voucher beneficiaries likely contributes to this higher purchase of fresh foods. Qualitative survey findings suggest that, due to the restricted assortment of commodities for Commodity Voucher beneficiaries, they often request Rohingya families receiving E-Voucher assistance to purchase more fresh vegetables on their behalf, engaging in barter by exchanging fresh food for fixed commodities. This underscores a strong preference for the E-Voucher assistance modality among Rohingya households.

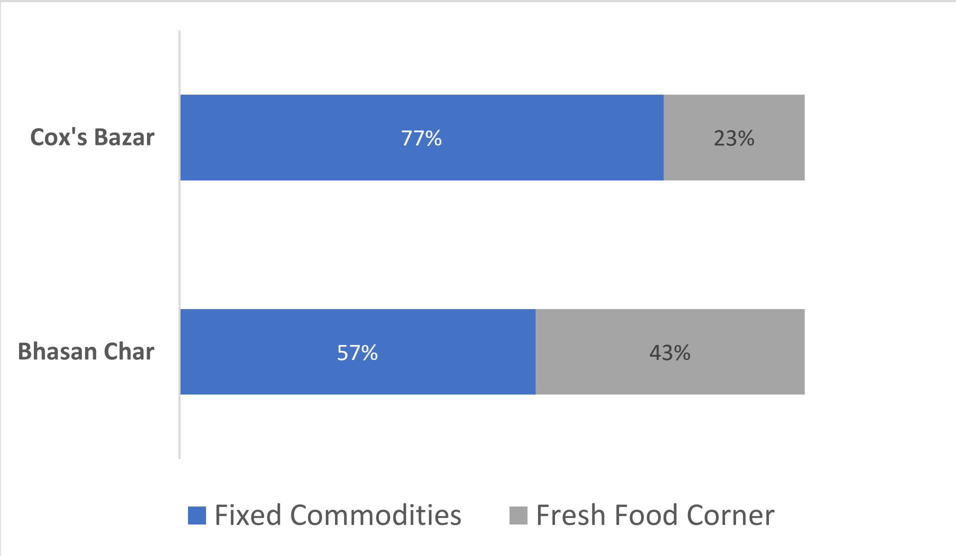


Figure 14: Average Transaction ratio of E-voucher entitlement in June and July (FFC vs Fixed Commodity)

11.2. Registration, licensing, VAT, and taxes

Traders in Bhasan Char reported that they did not have to possess any legal documentation, registration, or license, except for informal verbal approval from the NAVY. These traders were not found to be paying any Value Added Tax (VAT) or taxes for conducting business on Bhasan Char. However, many of these traders also operated businesses in Noakhali, where licensed traders likely paid taxes on the mainland. Rohingya traders in Bhasan Char were restricted to conducting business in dedicated spaces within the Rohingya markets.

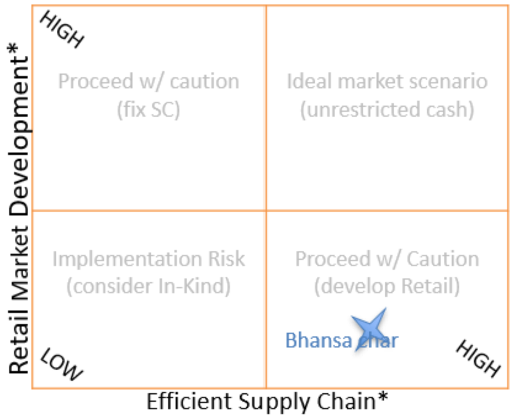
11.3. Maturity of Bhasan Char Market

Bhasan Char represents a nascent yet promising retail market. While Chittagong currently bears the primary responsibility for supplying sufficient quantities of goods, other markets such as Noakhali and Hatiya are stepping in to bolster the local retail network. The absence of financial institutions and the geographical remoteness prompted the adoption of mobile cash services by local small vendors, enhancing financial accessibility. Notably, the majority of customer demand stems from the refugee population, underlining the unique dynamics of this market.

The initial introduction of Cash-Based Transfer (CBT) programs has already initiated a positive impact on the local market. Interviewed traders have reported a significant increase in their customer base as a result. This early growth demonstrates that Bhasan Char's market, with appropriate enhancements, is poised to support cash activities effectively.

The market growth development illustrated in Figure: 15, indicates that Bhasan Char market if enhanced can support cash activities. However, this must be undertaken concurrently with improvements in the supply chain, establishment of comparable prices, enhancements in infrastructure, facilitation of healthy competition, and maintenance of food quality to effectively meet the demands of both the host community and the refugees.

While E-Vouchers are recommended for food assistance, a hybrid approach combining both cash and E-Vouchers can be considered to provide beneficiaries with more comprehensive assistance. Cash can be used for non-food items or other essential expenses.



- ✱ Retail Market Development= efficient retailers; natural competitive forces; value equation; lower WFP share
- ✱ Efficient Supply Chain= current/potential efficient SC access; adequate retailer scale; higher trade area density

Figure 15: Bhasan Char Market Maturity

12. Recommendations

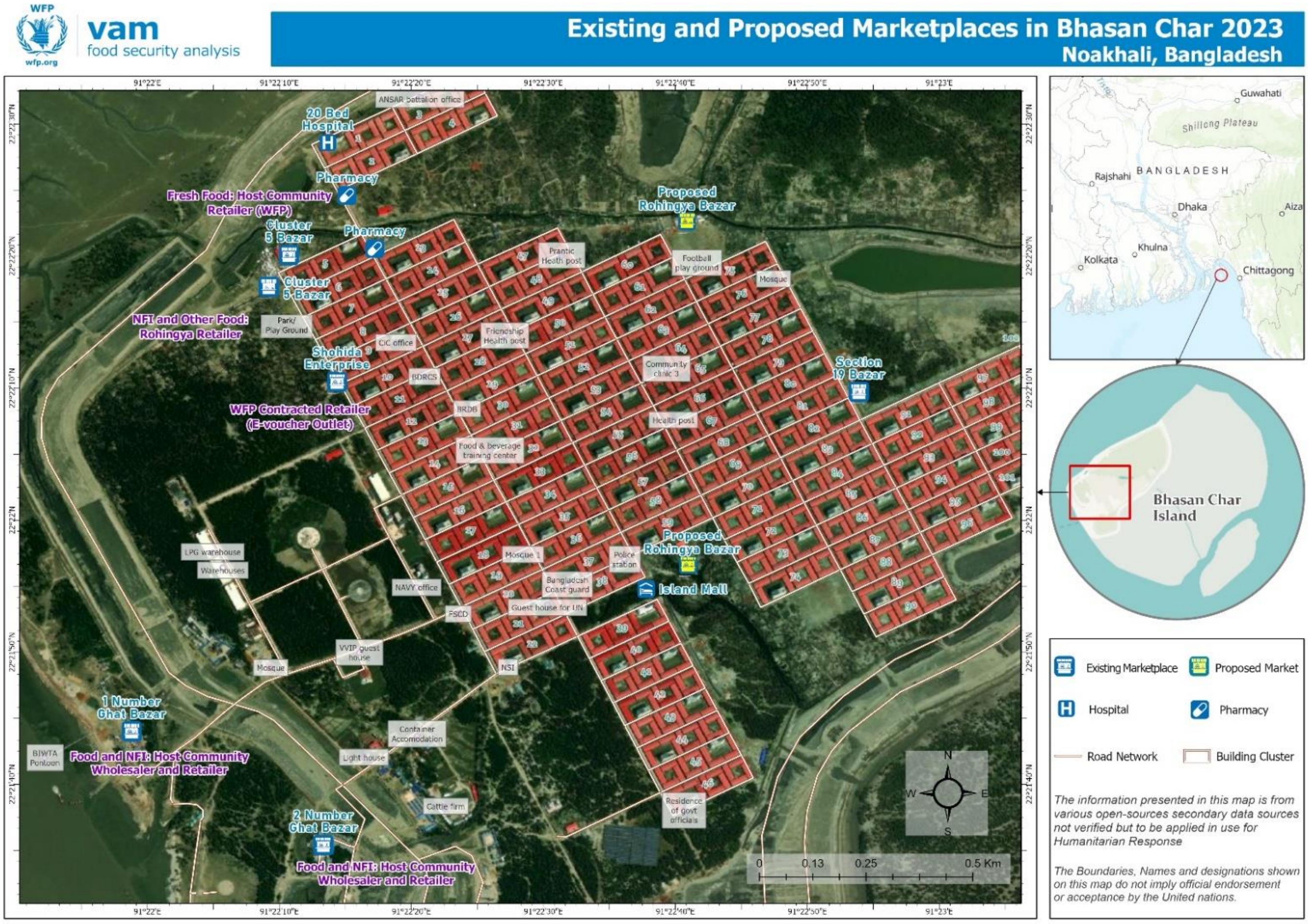
Given the complex dynamics and challenges of implementing Cash-Based Transfer (CBT) interventions on Bhasan Char Island and the desire E-voucher among the beneficiaries, it is crucial to prioritize actions that will have the most significant impact on the effectiveness and sustainability of cash assistance programs while diversifying modalities-

- ✓ **CBT Modality Expansion:** Respond to beneficiary preferences by expanding the use of E-Vouchers alongside cash assistance. This will offer beneficiaries greater flexibility and choice in their purchasing decisions.
- ✓ **Diverse Retailer Engagement:** Implement a diversified retailer engagement strategy, bringing in multiple retailers to create a competitive environment for food distribution outlets.
- ✓ **Proactive Price Monitoring:** Implement proactive price monitoring to protect beneficiaries from price exploitation. Collaborate with Government and relevant stakeholders and advocate for better market oversight. Price boards in shops and government capacity-building efforts will enhance transparency.
- ✓ **Diversification of Product Assortment:** Collaborate with suppliers to diversify available products, including fresh food. Introduce multiple retailers to prevent monopolies. This will cater to beneficiary preferences and dietary needs.
- ✓ **Strengthening the Supply Chain:** Ensure a stable supply chain by establishing predictable demand, diversifying suppliers, and training small traders. This will enhance inventory management and reduce supply chain disruptions.
- ✓ **Invest in Market Facilities:** Collaborate with government agencies, humanitarian organizations, and development partners to invest in durable market structures that can withstand adverse weather conditions, including heavy rain, flooding, cyclones, and tidal surges.

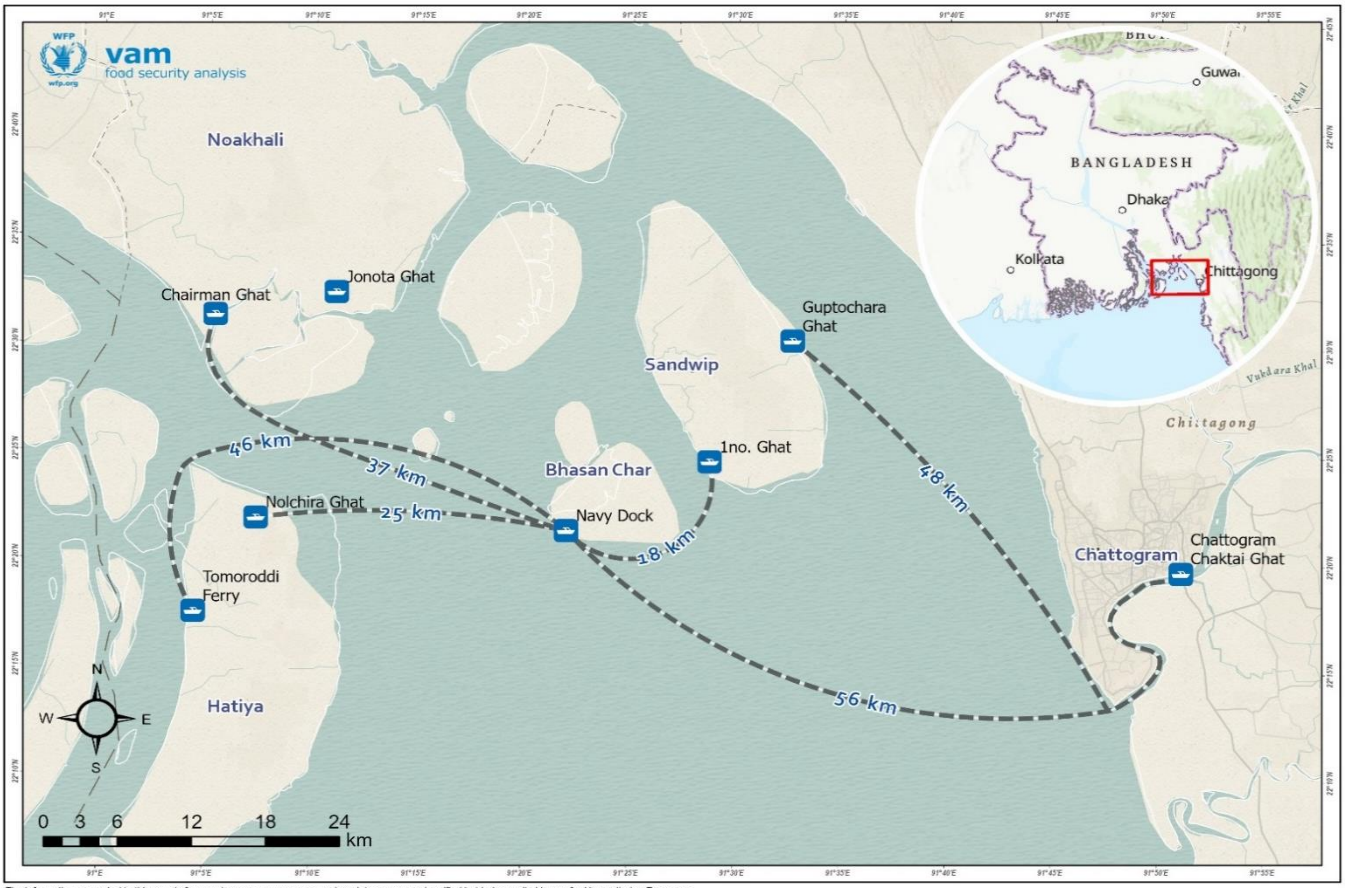
- ✓ **Contingency Planning for Extreme Weather**: Develop comprehensive contingency plans for adverse weather conditions. Collaborate with transportation providers to implement safety measures, ensuring the resilience of the supply chain. Furthermore, it is advisable to maintain a safety stock during the peak of the monsoon season, considering transportation challenges.
- ✓ **Economic Empowerment:** The Rohingya refugees on Bhasan Char face limited income-generating opportunities, resulting in financial constraints. To address this, it's imperative to create avenues for them to earn a sustainable income.
- ✓ **Self-Reliance:** Promoting self-reliance through livelihood opportunities and cash-for-work programs empowers Rohingya refugees to meet their daily needs and gradually reduce dependence on humanitarian assistance.
- ✓ **Transportation Infrastructure:** Collaborate with stakeholders to improve transportation infrastructure including jetties, ports, and roads, to facilitate the smooth flow of goods to and from the island.
- ✓ **Inclusive Business Model:** Introduce an inclusive business model that ensures equitable opportunities for both Bangladeshi and Rohingya traders, fostering a thriving and competitive market environment.

13. Annexes

Map of Bhasan Char Markets



Map of Supply chain routes to Bhasan Char



The information presented in this map is from various open-sources secondary data sources not verified but to be applied in use for Humanitarian Response
The Boundaries, Names and designations shown on this map do not imply official endorsement or acceptance by the United nations.

Market Functionality Assessment Bhasan Char 2023- Questionnaire

Variable	Question	Choices
Adm0Code	**ENUMERATOR: Please select the country.**	[Adm0Code] Adm0Name
Adm1Code	**ENUMERATOR: Please select the region.**	[Adm1Code] Adm1Name
Adm2Code	**ENUMERATOR: Please select the sub administrative unit.**	[Adm2Code] Adm2Name
MarketID	**ENUMERATOR: Please select the area of this market.**	[MarketID] MarketName
MKID2	**ENUMERATOR: Please select this marketplace from below.**	[1] Cluster 5 Rohingya Bazar (e voucher Section) [2] Cluster 5 Rohingya Bazar (Rohingya trader Section) [3] Shahida Enterprise (1 shop) [4] Section 19 Bazar (Bangladeshi Trader Section) [5] Section 19 Bazar (Rohingya Trader Section) [6] 1 no Ghat Bazar [7] 2 no Ghat Bazar [8] Maijdi Bazar [9] Chowmohuni Bazar [10] Chairman Ghat Bazar/ Janata Bazar [11] Ochkhali Bazar [12] Jahajmara Bazar [13] Afazia Bazar [14] Akbor Hat Bazar [15] Baten Market [16] Shiber Hat
EnumName	**ENUMERATOR: Please select your name.**	[enumid] enumname
SvyMod	**ENUMERATOR: Please select the questionnaire type:**	[1] Trader [2] Market
SvyModConf	**PLEASE CONFIRM: You will now start ${Modtext} survey in ${MarketName2} Market.**	[1] Yes [0] No
ShopSize	**ENUMERATOR: What is the approximate size of this shop?**	[1] Single stall (1 WFP 4X4 car does not fit inside) [2] Small shop (1 WFP 4X4 car fits inside) [3] Normal shop (2 WFP 4X4 cars fit inside) [4] Big shop (3 or more WFP 4X4 cars fit inside)
ShopEmployeeNb	**ENUMERATOR: How many employees are present in the shop?**	[Integer]
ShopCheckoutNb	**ENUMERATOR: How many check-out points/ cashiers operate in this shop?**	[Integer]
TrdConsentF2F	**ATTENTION! Now you will ask a series of questions to the shop manager/owner. Please introduce yourself and read the following: "Hi, my name is ${EnumName}. I am part of the market assessment team from World Food Programme. I would like to ask you a few questions about the commodities and their prices to understand the market conditions. This will take about 10 to 15 minutes. Do you agree to participate?"**	[1] Yes [0] No
TrdConsentNF2F	**ATTENTION! Please read the following: "I understand that you are unavailable to participate. I will not ask any questions. However, is it OK**	[1] Yes [0] No

Variable	Question	Choices
	if I observe the shop to see and record the items that are available in your shop?"	
TrdCustmGroup	**First, which type(s) of customers does your shop serve:**	[1] Households [2] Traders
CustomarNat	**Who are your main customers?**	[1] Rohingya Community [2] Bangladeshi Community
UOASoldGroup_Gr	**ENUMERATOR: A1. Which are the types of products that are normally sold in ${Moddispl_en}?**	[1] Food items - Cereals [2] Food items - Other food except cereal food [3] Non-food items [9999] N/A - None of the above
UOASoldGroup_FCer	**Select all CEREAL FOOD types that are normally sold.**	[fc101] Rice Coarse/ ShortGrain grade [fc102] Rice Medium Grade [fc103] Rice Fine Grade [fc104] Flatten rice [fc2] Maize [fc4] Wheat [fc5] Flour [fc6] Pasta/Noodles [fc7] Bread [fc9] Millet [fc10] Barley [fc999] Other (Please specify.)
UOASoldGroup_FCer_oth	**Which other 'Food items - Cereals'? Please specify (if any).**	[Text]
UOASoldGroup_FOth	**Select all OTHER FOOD types that are normally sold.**	[fo202] Red lentils [fo203] Mung bean [fo204] Chickpea [fo101] Potato [fo301] Green Banana [fo302] Eggplant/Brinjal (Gol begun) [fo303] Papaya (Green) [fo304] Bottle Gourd (Lau) [fo305] Bitter Gourd [fo306] Cabbage (Badhakopi) [fo307] Cauliflower (FulKopi) [fo308] Tomato [fo309] Carrot (Gajor) [fo310] Cucumber (Hybrid) [fo311] Bean-Hyacinth (Shimer Bichi) [fo312] Cow Peas (Pelon) [fo313] PalongShak [fo314] PuiShak [fo315] Lemon [fo316] Apple (Red) [fo317] Banana (ripe) [fo318] Malta [fo401] Powder Milk [fo402] Liquid Milk [fo501] Chicken - Broiler [fo502] Chicken - Sonali [fo503] Beef [fo504] Tilapia Fish [fo505] Pangas Fish [fo506] Koi Fish [fo507] Other popular Sea Fish [fo508] Dry Fish [fo509] Eggs – Farm [fo601] Oil Soybean [fo602] Oil Mustard(Shorishar Tel)

Variable	Question	Choices
		[fo603] Oil Palm [fo701] Onion [fo702] Salt [fo703] Garlic [fo704] Red Chili (Dried) [fo705] Turmeric [fo8] Sugar [fo999] Other non-cereal: ${UOASoldGroup_FOth_oth}
UOASoldGroup_FOth_oth	**Which other 'Food items - Other food'? Please specify (if any).**	[Text]
UOASoldGroup_NF	**Select all NON-FOOD items that are normally sold.**	[nf1] WASH - Drinking water, Purification tablet [nf2] WASH - Latrine construction materials [nf3] WASH - Hygiene NFIs (Toilet paper, Toothbrush, Toothpaste, Laundry detergent, Liquid dish detergent, Sanitary napkins, Individual soap) [nf4] Health - Medicine (Over-the-counter Pharmaceuticals) [nf5] Shelter - Shelter items (Tents, Plastic sheeting, Metal sheet, Tarpaulin, Temporary shelters, etc.) [nf6] Shelter - Constructing materials (Bricks, Bamboo, etc.) [nf7] Home - Clothing including shoes [nf8] Home - Bedding (Bed nets, Blanket, Floor mat/mattress, Ground insulation, Mosquito nets) [nf9] Home - Cooking and eating utensils [nf10] Home - Other stoves, fuel and lighting (e.g. LPG, Gas, Firewood, Charcoal, Solar) [nf11] Education - School material (Schoolbooks, Stationary, Uniforms) [nf12] Communication - Mobile phones/SIM cards/services and internet [nf999] Other non-food item: ${UOASoldGroup_NF_oth}
UOASoldGroup_NF_oth	**Which other 'Non-food items'? Please specify (if any).**	[Text]
MktTrdSkuNb_Cl	**ENUMERATOR: A2. What is the maximum number of distinct items on sale in any of the shops in this ${Moddispl_en}?**	[1] Between 1-50 [2] Between 51-200 [3] Between 201-1,000 [4] More than 1,000
UOAAvailScarce_Gr	**B1. Are there any products that are currently scarce in ${Moddispl_en}?**	Same as *UOASoldGroup_Gr*
UOAAvailScarce_FCer	**Which 'Food items - Cereals'?**	Same as *UOAAvailScarce_FCer*
UOAAvailScarce_FOth	**Which 'Food items - Other food'?**	Same as *UOAAvailScarce_FOth*
UOAAvailScarce_NF	**Which 'Non-food items'?**	Same as *UOAAvailScarce_NF*
TrdAvailRunout_Gr	**B2. Are you afraid of running out of stocks within a week from now for:**	Same as *UOASoldGroup_Gr*

Variable	Question	Choices
MktAvailRunout_Gr	**B2. Are traders in this market afraid of running out of stocks within a week from now for:**	Same as *UOASoldGroup_Gr*
UOAAvailRunout_FCer	**Which 'Food items - Cereals'?**	Same as *UOAAvailScarce_FCer*
UOAAvailRunout_FOth	**Which 'Food items - Other food'?**	Same as *UOAAvailScarce_FOth*
UOAAvailRunout_NF	**Which 'Non-food items'?**	Same as *UOAAvailScarce_NF*
UOAPriceIncr_Gr	**C1. Are there products whose prices greatly increased in the past 1 month?**	[Same as *UOASoldGroup_Gr*
UOAPriceIncr_Note	**More specifically, has the price greatly increased for:**	[Enumerator Note]
UOAPriceIncr_FCer	**Cereal food**	Same as *UOAAvailScarce_FCer*
UOAPriceIncr_FOth	**Other food except cereal food**	Same as *UOAAvailScarce_FOth*
UOAPriceIncr_NF	**Non-food Items**	Same as *UOAAvailScarce_NF*
UOAPriceIncr_expln	**ENUMERATOR: Please provide further explanation here if any.**	[Text]
TrdPriceStab_Gr	**C2. If we ask you what the price will be in a week from now, would you get it right for:**	Same as *UOASoldGroup_Gr*
MktPriceStab_Gr	**C2. If we ask the traders in this marketplace what the price will be in a week from now, would they get it right for:**	Same as *UOASoldGroup_Gr*
TrdPriceUnstab_Note	**More specifically, if you cannot get it right, for which ones would you NOT get right:**	[Enumerator Note]
MktPriceUnstab_Note	**More specifically, if they cannot get it right, for which ones would they NOT get right:**	[Enumerator Note]
UOAPriceUnstab_FCer	**Cereal food**	Same as *UOAAvailScarce_FCer*
UOAPriceUnstab_FOth	**Other food except cereal food**	Same as *UOAAvailScarce_FOth*
UOAPriceUnstab_NF	**Non-food Items**	Same as *UOAAvailScarce_NF*
UOAPriceStab_expln	**ENUMERATOR: Please provide further explanation here if any.**	[Text]
TrdResilStockout	**D1.1 Considering your customers' current demand, would your current stocks last at least one week?**	[1] Yes [0] No
TrdResilLeadtime	**D1.2 If you place an order today, do you expect to receive your products within a week?**	[1] Yes [0] No
TrdResilNodDens_Gr	**D2.1 Are most of your suppliers geographically located in the same place for:**	Same as *UOASoldGroup_Gr*
TrdResilNodDens_FU	**D2.1 More specifically, for which products are most of your suppliers geographically located in the same place:**	[Enumerator Note]
TrdResilNodDens_FCer	**Cereal food**	Same as *UOAAvailScarce_FCer*
TrdResilNodDens_FOth	**Other food except cereal food**	Same as *UOAAvailScarce_FOth*

Variable	Question	Choices
TrdResilNodDens_NF	**Non-food Items**	Same as *UOAAvailScarce_NF*
TrdResilNodComplex_Gr	**D2.2 Do you currently have more than 1 supplier for:**	Same as *UOASoldGroup_Gr*
TrdResilNodComplex_FU	**D2.2 More specifically, for which products do you currently have ONLY ONE (1) supplier?**	[Enumerator Note]
TrdResilNodComplex_FCer	**Cereal food**	Same as *UOAAvailScarce_FCer*
TrdResilNodComplex_FOth	**Other food except cereal food**	Same as *UOAAvailScarce_FOth*
TrdResilNodComplex_NF	**Non-food Items**	Same as *UOAAvailScarce_NF*
TrdResilNodCrit_Gr	**D2.3 Does your business mostly rely upon a single supplier for:**	Same as *UOASoldGroup_Gr*
TrdResilNodCrit_FU	**D2.3 More specifically, for which products is there a single supplier from whom most of your business relies upon:**	[Enumerator Note]
TrdResilNodCrit_FCer	**Cereal food**	Same as *UOAAvailScarce_FCer*
TrdResilNodCrit_FOth	**Other food except cereal food**	Same as *UOAAvailScarce_FOth*
TrdResilNodCrit_NF	**Non-food Items**	Same as *UOAAvailScarce_NF*
TrdResilNodDens_Note	**D3 Where are your suppliers geographically located for:**	[Enumerator Note]
TrdResilNodDensFCer_Loc	**Cereal food?**	[1] ${MarketName} [2] ${TrdNodDensLocNameAdm2}, outside of ${MarketName} [3] ${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2} [4] ${TrdNodDensLocNameAdm0}, outside of ${TrdNodDensLocNameAdm1} [5] Foreign countries, outside of ${TrdNodDensLocNameAdm0}
TrdResilNodDensFOth_Loc	**Other food except cereal food?**	[1] ${MarketName} [2] ${TrdNodDensLocNameAdm2}, outside of ${MarketName} [3] ${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2} [4] ${TrdNodDensLocNameAdm0}, outside of ${TrdNodDensLocNameAdm1} [5] Foreign countries, outside of ${TrdNodDensLocNameAdm0}
TrdResilNodDensNF_Loc	**Non-food Items?**	[1] ${MarketName} [2] ${TrdNodDensLocNameAdm2}, outside of ${MarketName} [3] ${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2} [4] ${TrdNodDensLocNameAdm0}, outside of

Variable	Question	Choices
		${TrdNodDensLocNameAdm1} [5] Foreign countries, outside of ${TrdNodDensLocNameAdm0}
TrdNodDensFCer_Note	**D3.1 If your CEREAL FOOD supply was total 10 in the past 1 month, how much of your supply came from the following places:**	[Enumerator Note]
TrdNodDensFCerLocShAdm3	**${MarketName}**	[Integer]
TrdNodDensFCerLocShAdm2	**${TrdNodDensLocNameAdm2}, outside of ${MarketName}**	[Integer]
TrdNodDensFCerLocShAdm1	**${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2}**	[Integer]
TrdNodDensFCerLocShAdm0	**${TrdNodDensLocNameAdm0}, outside of ${TrdNodDensLocNameAdm1}**	[Integer]
TrdNodDensFCerLocShIntl	**Foreign countries**	[Integer]
TrdNodDensFCer_Warning	**WARNING! GO BACK! The total sum is ${TrdNodDensFCerTotal}, NOT 10. Please go back and correct it.**	[Enumerator Note]
TrdNodDensFOth_Note	**D3.2 If your OTHER FOOD supply was total 10 in the past 1 month, how much of your supply came from the following places:**	[Enumerator Note]
TrdNodDensFOthLocShAdm3	**${MarketName}**	[Integer]
TrdNodDensFOthLocShAdm2	**${TrdNodDensLocNameAdm2}, outside of ${MarketName}**	[Integer]
TrdNodDensFOthLocShAdm1	**${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2}**	[Integer]
TrdNodDensFOthLocShAdm0	**${TrdNodDensLocNameAdm0}, outside of ${TrdNodDensLocNameAdm1}**	[Integer]
TrdNodDensFOthLocShIntl	**Foreign countries**	[Integer]
TrdNodDensNF_Note	**D3.3 If your NON-FOOD ITEMS supply was total 10 in the past 1 month, how much of your supply came from the following places:**	[Enumerator Note]
TrdNodDensNFLocShAdm3	**${MarketName}**	[Integer]
TrdNodDensNFLocShAdm2	**${TrdNodDensLocNameAdm2}, outside of ${MarketName}**	[Integer]
TrdNodDensNFLocShAdm1	**${TrdNodDensLocNameAdm1}, outside of ${TrdNodDensLocNameAdm2}**	[Integer]
TrdNodDensNFLocShAdm0	**${TrdNodDensLocNameAdm0}, outside of ${TrdNodDensLocNameAdm1}**	[Integer]
TrdNodDensNFLocShIntl	**Foreign countries**	[Integer]
TrdServiceLoyalty	**E1. Do you offer your customers a loyalty program that gives them either a discount or points that they can use now or later at your shop?**	[1] Yes [0] No
TrdServicePos	**ENUMERATOR: Does this shop have a POS (Point of Sale) system?**	[1] Yes [0] No

Variable	Question	Choices
TrdServicePosAnalysis	**E2. Do you analyse your POS (Point of Sale) data such as inventory data, catalogue data?**	[1] Yes [0] No
LastSection_Note	**ATTENTION! Please read the following: "Thank you for your patience. This is the final section of the survey."**	[Enumerator Note]
TrdValChainTopTwo	**C3. Which are the top two items in terms of sales volume in your shop?**	Same as *UOAAvailScarce_FCer+ UOAAvailScarce_FOth+ UOAAvailScarce_NF*
TrdValChainPriceSell	**C3.1 What is the selling price of ${ValChainCommodName} per kg? (Per Unit)**	[Decimal]
TrdValChainPriceSellUnit	**ENUMERATOR: Enter the unit of the selling price:**	[Decimal]
TrdValChainPriceSellUoM	**ENUMERATOR: Select the unit of measure:**	[1] KG (kilogram) [2] gr. (gram) [3] L (litre) [4] ml (millilitre) [5] Pc (1piece) [999] Other unit (Please specify.)
TrdValChainPriceUnit_Oth	**ENUMERATOR: If your selected 'Other', please specify.**	[Text]
TrdValChainSource	**C3.2a From which town/city is ${ValChainCommodName} sourced?**	[Text]
TRDCarryingCost	**How much is the carrying cost for ${ValChainCommodName} per unit?**	[Decimal]
TRDCarryingCostUnit	**Enter the unit of the Carrying Cost:**	[1] KG (kilogram) [2] gr. (gram) [3] L (litre) [4] ml (millilitre) [5] Pc (1piece) [999] Other unit (Please specify.)
TrdValChainSupplierName	**C3.2b What is the name of your main supplier for ${ValChainCommodName}?**	[Text]
TrdValChainSupplierLoc	**C3.2b Wheris ${ValChainCommodName} located?**	[Text]
TrdValChainSupplierContact	**C3.2b What is the mobile number of your main supplier for ${ValChainCommodName}?**	[Text]
Leadtime2ScaleUp	**If your shop's commodity demand increases 4 times from what it is now what will be the lead time required for you to tackle the demand?**	[1] 1-2 Weeks [2] 1 Month [3] 2 Month [4] 3 months or above
ScaleUpInitiatives	**What Initiatives you will take to meet the increased demand?**	[Text]
WomanCustomerPercentage	**If your shop serve 100 customers a day, on average how many Female Customer comes to your shop?**	[Integer]
rohingyaShopOwner	**If there is a total of 100 shops in this market, how many shops in this market are owned by Rohingya Refugees?**	[Integer]
rohigyaShopNumber	**If there is a total of 100 shops in this market, how many shops in this market are run by Rohingya Refugees?**	[Integer]
TraderName	**What is the trader's Name?**	[Text]

Variable	Question	Choices
TrdConsent2NF2F	**ATTENTION! Please read the following: "The survey has ended. Thank you very much for your participation. Is it OK if I observe the products sold in this shop and the premise areas before leaving?"**	[1] Yes [0] No
TrdSkuNb_Cl	**A2. How many distinct items are on sale in this shop?**	[1] Between 1-50 [2] Between 51-200 [3] Between 201-1,000 [4] More than 1,000
TrdServiceShopExp	**E1. Shopping Experience: Which of the following applies to this shop?**	[1] Products are displayed such that it is easy to identify and select [2] Price tags are visibly displayed (printed or handwritten) [3] It is possible to purchase from this shop remotely (e.g. online shopping) [9999] N/A - None of the above applies
TrdServiceCheckoutExp	**E2. Check-out Experience: Which of the following applies to this shop?**	[1] The shop accepts more than one form of payment [2] The waiting time at checkout is normally shorter than 10 minutes [3] Itemized receipts are automatically issued (not handwritten) [9999] N/A - None of the above applies
TrdServicePayType	**E2.2 Which forms of payment are accepted?**	[1] Cash [2] Mobile Money [3] Debit card [4] Credit card [5] Informal credit / Purchase on credit [6] E-Voucher (WFP Card) [999] Other (Please specify.)
TrdServicePayType_oth	**Please specify 'Other'.**	[Text]
TrdStructureType	**F1. Which is the structure that best describes this shop?**	[1] Open-air/ Portable unit (stand, vehicle, carriage etc.) [2] Semi-permanent structure (corrugated iron, wooden, rubhall/ wikhall etc.) [3] Permanent/ Concrete building structure
MktStructureType	**F1. Which are the structures that best describes the majority of shops in this market?**	[1] Open-air/ Portable unit (stand, vehicle, carriage etc.) [2] Semi-permanent structure (corrugated iron, wooden, rubhall/ wikhall etc.) [3] Permanent/ Concrete building structure
TrdStructureCond	**F2. Which of the following best describes this shop?**	[1] Poor state, severe maintenance issues [2] Some structure damages, minor maintenance issues [3] Good state, intact, no maintenance issues
MktStructureCond	**F2. Which of the followings best describe the majority of shops in this market?**	[1] Poor state, severe maintenance issues [2] Some structure damages, minor maintenance issues

Variable	Question	Choices
		[3] Good state, intact, no maintenance issues
UOAStructureFeat	**F3. Which of these features apply in/nearby ${Moddispl_en}?**	[1] Closed sewage system [2] Dedicated waste collection area [3] Walkways and emergency exit(s) [4] Shelter [5] Uninterrupted electricity [6] Reliable communication network (mobile phone coverage and/or internet) [7] Water availability (manual pump or tap in close proximity of each vendor, i.e. Max 5 min walking) [8] Toilets [9999] N/A - None of the above exists
MktCompetLessFive_Gr	**G1. Select the product group that has LESS THAN FIVE (5) traders in this market:**	Same as *UOASoldGroup_Gr*
MktCompetOneContr_Gr	**G2. Select the product group that has ONE TRADER that controls this market:**	Same as *UOASoldGroup_Gr*
MktTraderNb	**G3. How many traders operate in this market?**	[0] 1 [1] 2-5 [2] 6-15 [3] 16-50 [4] 51-100 [5] 101-500 [6] 500+
UOAQlty_Note	**H. Please observe the premise areas and all surfaces in and around ${Moddispl_en}.**	[Enumerator Note]
UOAQltyFood	**Is food in ${Moddispl_en} protected from water, heat, direct sunlight, pests, chemicals, or other contaminants?**	[1] Yes [0] No
UOAQltyFVegFruGood	**Does food in ${Moddispl_en} have NO visible signs of spoilage and bad smells?**	[1] Yes [0] No
UOAQltyFVegFruSeparate	**Are fresh fruits and vegetables in ${Moddispl_en} separated from raw meat, poultry, fish or seafood?**	[1] Yes [0] No
UOAQltyFAnimRefrig	**Are raw meat, poultry, fish or seafood and dairy products in ${Moddispl_en} stored and displayed in refrigerated units that are on and working?**	[1] Yes [0] No
UOAQltyFAnimRefrigWork	**Is refrigeration in ${Moddispl_en} always working?**	[1] Yes [0] No [9999] N/A - Not Applicable; there are no refrigeration units
UOAQltyFPackGood	**Are processed pre-packaged foods in ${Moddispl_en} intact and in properly labelled containers?**	[1] Yes [0] No [9999] N/A - Not Applicable; there is no processed pre-packaged food
UOAQltyPlastGood	**Are food packages intact and free from signs of decay or damage?**	[1] Yes [0] No [9999] N/A - Not Applicable; there are no products sold in containers/bottles
UOAQltyPackExpiry	**Are all goods in labeled containers NOT exceeding their "best-use-before"/ "use-by" date?**	[1] Yes [0] No [9999] N/A - Not Applicable; expiry dates are not visibly indicated

Variable	Question	Choices
MktAccessProt_Note	**Please observe the areas near and in this market.**	[Enumerator Note]
MktAccessCnstr	**I1. Which of the following access issues are observed in this market?**	[1] Access is normally difficult because the marketplace is away from major road network [2] Access is temporarily limited due to seasonal issues (e.g. monsoon, seasonal floods) [3] Access is currently affected bya civil unrest or natural disaster (e.g. earthquakes, hurricanes) or disease outbreak (quarantine) [9999] N/A - None of the above is an issue
MktProtCnstr	**I2. Which of the following protection issues are observed in this market?**	[1] There are social barriers to marginalized groups based on sociodemographic status [2] Physical threats exist in the market for certain groups [3] Security to reach and/or in the marketplace is an issue for everyone [9999] N/A - None of the above is an issue
MktAccessCnstr_NatrDis	**If there has been a natural disaster, which was it?**	[1] Earthquakes [2] Floods [3] Droughts [4] Tsunami [5] Storms (Tropical cyclones, hurricanes, typhoons) [6] Forest fires [7] Landslides [8] Volcanoes [999] Other (Please specify.)
MktAccessCnstr_NatrDis_Oth	**ENUMERATOR: If your selected 'Other', please specify.**	[Text]
MktProtCnstrSoc_Who	**If there are social barriers, what are they based on?**	[1] Gender [2] Age [3] Ethnicity [4] Religion [5] Physical disability [999] Other
MktProtCnstrPhysc_Who	**If there are physical threats, who are under these threats?**	[1] Women [2] Children [3] Certain ethnic group [4] Certain religious group [5] Physically disabled population [999] Other
MktProtCnstrSec_Sec	**If there are general security issues, which types of threats are present?**	[1] Civil unrest [2] Armed conflict [3] Crime [4] Terrorism [999] Other (Please specify.)
MktProtCnstrSec_Sec_Oth	**ENUMERATOR: If your selected 'Other', please specify.**	[Text]
MktProtCnstrSoc_Ethnc	**I1.2 To which ethnic group(s) are there social barriers?**	[1] Bangladeshi [2] Rohingya

Variable	Question	Choices
		[3] Upozati [999] Others
MktProtCnstrSoc_Relign	**I1.2 To which religious group(s) are there social barriers?**	[1] Muslim [2] Hindu [3] Buddhist [4] Christian [999] Others
MktProtCnstrSoc_oth	**I1.2 If there are social barriers to 'Other' group, which group(s)?**	[Text]
MktProtCnstrPhysc_Ethnc	**I2.2 Against which ethnic group(s) are there physical threats?**	[1] Bangladeshi [2] Rohingya [3] Upozati [999] Others
MktProtCnstrPhysc_Relign	**I2.2 Against which religious group(s) are there physical threats?**	[1] Muslim [2] Hindu [3] Buddhist [4] Christian [999] Others
MktProtCnstrPhysc_oth	**I2.2 If there are physical threats to 'Other' group, which group(s)?**	[Text]
ScaleUpInitiativesM	**What Initiatives you will take to meet the increased demand?**	[Text]
WomanCustomerPercentageMarket	**If this market serves 100 customers a day, on average how many Female Customer comes to your shop?**	[Integer]
LessWomanCustomerReasonMarket	**What is the reason behind less femal customer coming to this market?**	[Text]
ownerShopM	**Who Owns shops in this market?**	[Text]
ShopPermissionWhereM	**How did you get permission to do business here?**	[Text]
ShopHasRegNumM	**Does shops in this market has any formal registration number?**	[1] Yes [0] No
RefugeeShopPermisionM	**Can refugees also get permission to do business here?**	[Text]
RefugeeMangeBdShopM	**Can refugees manage shops owned by Bangladeshi in BC?**	[1] Yes [0] No
rohigyaShopNumberM	**If there is a total of 100 shops in this market, how many shops in this market are run by Rohingya Refugees?**	[Integer]
RefugeesMostSold	**What are the most sold products among refugees?**	[Text]
HCMostSold	**What are the most sold products among host communities/staff officials living here?**	[Text]
KIIName	**What is the Key informant's Name?**	[Text]
UOAPicture	**Please take a picture of ${Moddispl_en}.**	[Image]
UOAWebReach	**Does ${Moddispl_en} appear in internet search?**	[1] Yes [0] No [9999] N/A - I am unable to check right now due to poor connection.
TrdShopName	**Please write down the full name of this shop.**	[Text]

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