Pre-Crisis Market Mapping and Analysis:

The wheat flour market system in the context of severe flooding

Ghotki and Sanghar Districts, Sindh Province, Pakistan

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Executive summary

Pre-Crisis Market Mapping and Analysis (PCMMA) is a relatively new approach to conducting market assessments prior to emergencies in order to anticipate how markets will respond after a shock occurs. The PCMMA in Pakistan was the first of three pilot PCMMA assessments that the IRC is conducting in 2015 in order to generate learning that can be used to refine the approach and the PCMMA guidance manual, while also providing information to humanitarian actors in Pakistan to feed into strategic and operational emergency planning efforts. In Pakistan, the PCMMA exercise additionally served as a capacity building exercise to strengthen abilities of practitioners to carry out market analysis after an emergency occurs.

The PCMMA took place from 18 May to 1 June 2015 in Sindh, Pakistan, covering Badin, Ghotki and Sanghar districts. The exercise was hosted by the IRC, with participation from eight other organizations. The analysis team followed the PCMMA guidance to apply an approach similar to that of the Emergency Market Mapping and Analysis (EMMA) Toolkit in a pre-crisis context. For the purpose of this PCMMA assessment, the severe floods of 2010 (for Ghotki) and 2011 (for Sanghar and Badin) were selected as the reference crises. The team examined how the floods impacted the function of four selected critical market systems in order to draw conclusions about the likely impact of future floods on those market systems and to propose appropriate market-based preparedness and response interventions. This report presents the findings and recommendations for the wheat flour critical market system in Ghotki and Sanghar Districts.

The approximately 212,000 households in Ghotki and Sanghar Districts that were affected by the 2010/11 floods comprised the focus population for this assessment. The poorest people in this group work as either daily laborers or as sharecroppers, many of whom live in perpetual debt to their landlords. Most of those who own land are relatively poor themselves, with only a few acres of land of their own and sometimes additional acreage that they rent from landlords. Most of these households live in perpetual debt to landlords and retailers that eases only slightly following each year's harvest.

Wheat is the dominant crop and staple food in these districts, planted October through December and harvested March through May. A portion of the wheat produced in Ghotki and Sanghar is sent to other parts of Pakistan or exported internationally in a normal year, and the rest remains in the districts to satisfy local demand. Though there are significant and complicated social issues and vulnerabilities related to the system of sharecropping and the constant debt in which many producers and other market actors operate, in non-flood times the wheat flour market system in the region is otherwise fairly robust, with production and capacity levels that exceed local-level demand. The market is competitive and integrated, with little variation in prices along the market chain and throughout the year.

During a future flood emergency, the wheat flour market system is likely to respond as it did in 2010/11; that is, prices will increase slightly, due to both transport issues and also to the destruction of wheat flour stocks throughout the market chain. Nonetheless, stocks within the district are likely to be adequate to meet the district-level demand for wheat flour for several months, provided that affected households are somehow able to access those stocks.

However, the flooding will likely lead to massive damage to and blockages of key transportation infrastructure that will impede the movement of rice from one part of the district to another and that will affect the entire market chain, from large mills to market retailers to tenant farmers. These very serious

transportation challenges must be addressed if the market is to effectively supply the flood-affected population with the wheat flour that they require during and after the flood.

This report proposes the following recommendations for emergency preparedness:

- **A mapping and communication exercise**. Transport routes and land areas that are vulnerable to flooding should be mapped out, and designated gathering places and transport routes identified. This information should then be disseminated to market actors and populations living in expected flood zones.
- **The development and implementation of longer-term agricultural development/poverty eradication programs**. Such programs are necessary to ultimately address the underlying power inequality in wheat production in Sindh Province and thereby reduce the vulnerability of small-scale farmers to shocks. Further reflection by agencies with expertise in the development of farming cooperatives and value chain development will be necessary to flesh out the details of such of program.
- **Advocacy at the national-level food security cluster for humanitarian actors to consistently provide the complete caloric requirements for the poorest households in emergencies**, so that these households can avoid practicing negative coping strategies that could compromise their economic well-being for years to come.
- **Support to actors throughout the market chain (from producers to government warehouses)** to help relocate and flood-proof storage facilities along the market chain, to reduce losses to wheat flour stocks within the districts in the event of future flooding.

This study recommends a two-pronged humanitarian response during future floods:

- **In-kind provision of wheat flour to the most vulnerable households for the first month of intense flooding**. This flour should still be procured within the respective districts, from wholesalers who have adequate stocks remaining from the previous season.
- **Unconditional cash grants to cover wheat flour needs until the wheat harvest in March/April**, unless needs assessments determine that vulnerable households no longer need this support.

I. Overview of assessment

Objectives

The Pre-Crisis Market Mapping and Analysis (PCMMA) guidance document[1] is a practical, step-by-step resource to guide market analysis practitioners and team leaders to conduct market assessments prior to emergencies in order to anticipate how markets will respond after a shock occurs. PCMMA is designed to help agencies improve response preparedness, to feed into contingency planning efforts and to contribute to the design of disaster risk reduction programs by identifying certain parts of market systems which may be vulnerable to shocks. Ideally, pre-crisis analysis will help to increase the speed of emergency responses and provide guidance on how to strengthen market systems ahead of emergencies to reduce the impact of future disasters on lives and livelihoods. Because PCMMA is still a relatively new approach, the IRC has devoted resources to conducting three pilot PCMMA assessments in disaster-prone countries in 2015 in order to generate learning that can be used to refine the approach and the PCMMA guidance manual, while also informing the strategic and operational emergency planning efforts of humanitarian actors in Pakistan. This PCMMA exercise additionally served as an opportunity to build the capacity of humanitarian practitioners to carry out market analyses in humanitarian contexts.

The PCMMA analysis is based on comparing a baseline level of market functioning to the level of market functioning during an emergency, in order to anticipate how markets will be impacted in future emergencies. During this exercise, the baseline was established as 2014, which was deemed a "normal" year, more specifically in August, just before the onset of seasonal flooding. The emergency-affected market scenario was defined as the worst-case flood scenario in the three districts, which for Badin and Sanghar was agreed to be September 2010, and for Ghotki September 2011. The PCMMA team compared how market systems were functioning during the 2010/2011 flooding with how they functioned in August 2014 to model how markets will respond during future flooding. The resulting analysis is intended to provide evidence and information to help determine programming options in advance of an emergency. The recommendations of this analysis are based on market functioning, and would need to be further informed by operational feasibility and needs assessments following the onset of an emergency.

In summary, the specific objectives of the Pakistan PCMMA exercise were:

1. **Emergency response -** To recommend the most appropriate market-sensitive programming options (including both direct assistance to the affected population and indirect assistance to market actors) to respond to monsoon season flooding.

2. **Preparedness / DRR -** To identify program options to strengthen markets and address potential constraints in access or availability of essential items during floods.

3. **Capacity building -** To strengthen skills of humanitarian actors in Pakistan to conduct market analyses before and after emergencies.

4. **To learn about the PCMMA approach itself -** to capture learning about the PCMMA approach in order to inform revisions and improvements to the PCMMA guidance manual.

[1] Available at http://emma-toolkit.org/practice/pre-crisis-market-mapping-and-analysis/

Methodology

This analysis exercise followed the PCMMA guidance to apply an approach similar to that of the Emergency Market Mapping and Analysis (EMMA) Toolkit in a pre-crisis context. The EMMA toolkit is a mixed methods (qualitative and quantitative) approach that is based on 10 logical steps and is designed for non-specialists to rapidly conduct market assessments in a quick and low-cost manner. The approach includes three "strands" of analysis, including a gap analysis to understand the material needs at household level, a market analysis to evaluate the capacity of the market to respond to those needs, and a response analysis to identify appropriate options for programming.

The PCMMA took place from 18 May to 1 June 2015 in Sindh, Pakistan, covering three districts – Badin, Ghotki and Sanghar. The exercise was hosted by the IRC, with participation from eight other organizations – HWA Foundation, Takhleeq Foundation, Root Work Foundation, Care, ACTED, ACF, Concern Worldwide, WHH and Oxfam. The three districts of the assessment were selected based on (1) Geographic coverage of the north, central and southern parts of Sindh; (2) Proximity to partner agency offices to support the assessment teams; and (3) Having been seriously affected during the 2010/11 floods. In total, 18 national and 3 expatriate staff participated in data collection and analysis, including intensive mentoring support to 4 critical market team leaders. A training workshop was held at the beginning of the exercise from 19-21 May in order to introduce the PCMMA approach, train team members in market analysis and prepare fieldwork activities. This workshop was followed by 7 days of intensive field-level data collection in each district and a 3-day analysis workshop to review and analyze the data.

Data was collected from key informants and market actors using semi-structured interview tools and from communities through detailed focus group discussions and household interviews. For the wheat flour portion of this exercise, the sample included 15 households, 20 market vendors and 3 focus groups, as well as a number of key informants. Qualitative and quantitative data was inputted into databases for each critical market system on a daily basis and shared with the other districts to coordinate data collection efforts across districts.

The size and scope of this exercise, in terms of the geographic areas of coverage, the number of team members and the number of critical market systems studied, were quite ambitious, especially considering that this was a pilot study. In one sense, this breadth was extremely positive, as it reflected a strong interest in market assessments among a range of humanitarian actors in Sindh. However, it also made it difficult to allocate appropriate time to each of the study's four objectives. In addition, few of the team members, team leaders included, had any prior market analysis experience, which meant that leaders were learning key concepts and the methodology alongside the people they were leading. Finally, the assessment leaders were not always able to provide in-person support to the field team because of the geographic spread of the study (3 districts for 2 assessment leaders) and because of security concerns. Though a good effort has been made to discuss outstanding questions and clarify key findings with the field team, all of these factors had implications for the quality of data and the resulting analysis.

II. Crisis scenario

Severe floods recur on a regular basis in Pakistan; the country has experienced 12 particularly destructive flood years since its independence in 1947. Flooding of some form affects parts of the country almost every year, normally during the late monsoon months of August and September, and it is anticipated that climatic changes may mean floods of greater frequency and destructive force in the future. The

consecutive flood years of 2010 and 2011 were the worst floods to date, affecting 20 million and 9.3 million people, respectively, throughout the country.[2]

Due to its flat topography and its location at the bottom of the Indus River basin, Sindh Province is particularly vulnerable to riverine floods, triggered by heavy monsoon rains. According to Pakistan's National Disaster Management Agency (NDMA), Sindh faces the added challenges of a lack of protective infrastructure or integrated flood management and inadequate awareness about monsoon hazards and responses among the vulnerable members of the population.

The 2010/11 floods led to loss of life and also damaged standing crops, household and livestock food stocks, health, education and road infrastructure, houses, irrigation and drainage facilities and protected drinking water sources. Millions of people were displaced for several months or more while waiting for the flood waters to subside. Unless there are major changes to protective infrastructure, it is likely that a similar flood in the future will have a similar impact.

The 2010/11 floods saw a massive humanitarian response in Sindh that spanned all of the usual emergency sectors, like shelter, food security, WaSH, health, education and nutrition.[3] The government of Pakistan and a multitude of Pakistani NGOs led the initial response and was later joined by the international humanitarian community. The government drew some criticism for restricting when, where and how NGOs could intervene; notably for this assessment, it sometimes discouraged NGOs from distributing unconditional cash grants to flood-affected people.[4] While some NGOs did utilize CTPs to deliver food assistance, the vast majority of the assistance provided was done in-kind. Sindh Province was and continues to be served by a range of humanitarian actors, including the nine agencies involved in this assessment and many more.

In response to the 2010/11 floods, the NDMA developed a contingency plan in an effort to be better prepared for such events in the future. In the plan, authority for all aspects of flood preparedness, including risk assessment, resource mapping and deployment, is delegated to the district-level authorities; however, at the provincial and district level it is not clear to what extent these measures have been undertaken.[5]

For the purpose of this PCMMA assessment, the floods of 2010 (for Ghotki) and 2011 (for Sanghar and Badin) were selected as the reference crises. Although less severe floods happen more regularly, it was decided to focus on a worst-case scenario, both because the impacts of the floods throughout our districts of focus were more evident during such a scenario and also because our conclusions about the market's capacity to deliver needed humanitarian assistance would err on the conservative side and be applicable even to less severe flood scenarios. This decision is consistent with NDMA's choice to utilize the worst-case scenario as the basis for its contingency plans.[6]

III. Scope of the assessment

Critical market systems

During the preparatory phase of this study, the IRC's team in Pakistan prepared a list of categories of goods and services that are crucial for the survival and livelihoods of vulnerable people in Sindh and that

[2] http://www.ndma.gov.pk/Documents/Contingency_Plan/2012/CP_NDMA.pdf
[3] http://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/assessments/ACF_Nutrition_Causal_Analysis_Pakistan_2012.pdf
[4] https://www.oxfam.org/sites/www.oxfam.org/files/bn-pakistan-floods-emergency-16-02-12-en.pdf
[5] http://www.ndma.gov.pk/Documents/Contingency_Plan/2012/CP_NDMA.pdf
[6] http://www.ndma.gov.pk/Documents/Contingency_Plan/2012/CP_NDMA.pdf

were heavily impacted by the 2010/11 floods. This list included staple foods; other agricultural commodities like fruits and vegetables; construction materials; livestock and livestock fodder; drinking water; daily labor (on farm/ off farm) and non-food items like soap, storage containers and buckets.

The IRC then consulted with representatives of agencies with which it partners via the PEFSA consortium[7] and the senior team members of the agencies participating in the assessment. The group identified specific commodities for each of the categories on the list and agreed upon a set of criteria to help determine which critical market systems to focus on in this study: (1) Critical to save or sustain lives of vulnerable people in the affected areas; (2) Significantly impacted during past floods; (3) Relevant to the expertise and past activities of participating organizations. Based on these criteria, the group identified the critical market systems listed in the table below. These were validated by assessment team members during the pre-assessment workshop.

Table 1: Critical Market Systems Selected for the PCMMA

Badin	**Ghotki**	**Sanghar**
Rice	Wheat flour	Wheat flour
Wheat straw	Wheat straw	Wheat straw
Drinking water	Drinking water	Drinking water

Separate reports have been produced for each of the critical market systems assessed in Sindh in 2015. This report focuses only on wheat flour. Because rice, rather than wheat, is the dominant crop in Badin District, this report covers only the wheat flour market system in Ghotki and Sanghar districts.

Key Analytical Questions

In accordance with the EMMA approach, the assessment team developed and approved a set of key questions that guided the field research and analysis. The questions were the same for all of the critical market systems. These questions are answered at appropriate points in the analysis and recommendation sections of this report.

1. How is the critical market behaving today, and how will it behave during the flood emergency?
    a. Is it supplying the appropriate volume/quality of goods?
    b. Is it integrated and competitive?
    c. To what extent can it respond to an increase in demand?

2. Will the affected population be able to continue to access the needed volume and quality of goods from the critical market system during the emergency?

3. What are the appropriate market-sensitive programming options to meet the needs of the affected population for each critical market system?

4. What are the most appropriate ways to reduce the possible impact of the floods on the market system and on the target population's access to markets?

[7] Pakistan Emergency Food Security Alliance, including ACF, ACTED, Care, IRC, Oxfam and Save the Children

IV. Focus Population and Locations

Figure 1: Districts of focus within Sindh Province (map courtesy http://www.sindh.gov.pk/)

Aside from its manufacturing and financial centers near Karachi, Pakistan's Sindh Province is largely agricultural, growing rice, wheat, cotton, sugarcane, bananas, mangos and animal fodder. Though the province as a whole produces more agricultural goods than it consumes, the productivity of agriculture varies enormously by district, and 75% of Sindh's districts are actually deficit producers.[8]

Although 80% of Sindh's population engages in farming, less than 64% actually own land. The poorest people work as either daily laborers (including many near the coast who work as fishermen) or as sharecroppers, many of whom live in perpetual debt to their landlords. Most of those who own land are relatively poor themselves, with only a few acres of land of their own and sometimes additional acreage that they rent from landlords. Other development indicators for the province are quite stark; only about half of its youth attend primary school,[9] 50% of the population practices open defecation, and chronic malnutrition affects more than half of all residents.[10]

As mentioned, this PCMMA exercise focused on two districts of Sindh – Sanghar and Ghotki. The target population for this study was the flood-affected population in the three districts, totalling an estimated 212,000 households. A livelihoods assessment[11] conducted in 2013 for Shikarpur, another district in Sindh Province, identified the following wealth breakdown, which was adapted for the PCMMA study: Very Poor: 32%; Poor: 30%; Middle: 28%; and Better Off: 10%. The team triangulated the four wealth group categories and land/livestock characterizations throughout Sanghar and Ghotki Districts. Community-level focus group discussions and household interviews were carried out in the three districts in order to verify if the land and cattle owning characterizations from Shikarpur coincided with community perceptions in the target districts of this PCMMA. Based on this information, we largely used the same wealth group definitions as in Shikarpur.

[8] http://practicalaction.org/docs/emma/EMMA-Pakistan-Sindh-report.pdf
[9] http://tribune.com.pk/story/759232/international-literacy-day-only-half-of-sindh-goes-to-primary-school/
[10] http://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/assessments/ACF_Nutrition_Causal_Analysis_Pakistan_2012.pdf
[11] http://wins.org.pk/resources_files/baseline_report_fsl.pdf

Table 2: Focus population for the PCMMA assessment

Overall Focus population	Focus population sub-group	Number of households	Locations
Flood-affected people in 2 districts of Sindh (Sanghar and Ghotki) (176,776 HHs in Sanghar and 35,714 HHs in Ghotki)	Landless households with limited/no access to subsistence agricultural production. Rely heavily on unskilled labor for income, including agricultural labor on other people's land. Some very poor households own livestock, but generally only 1-2 small ruminants at most.	68,000	All flood-affected areas of Sanghar and Ghotki.
	Tenant farmers/sharecroppers with little or no land of their own. They generally farm a small number of acres, no more than 5, and are heavily dependent on their landlords for loans of agricultural inputs. They live in near-constant debt and surrender up to 75% of their wheat harvest in order to repay these and other loans. Almost all poor households own at least 1 small ruminant, and some own 1 or more buffalo, which provide dairy products for the household and can be sold in times of need.	64,000	
	Small landowners/ farmers with most land holdings, up to 12 acres in size. Sometimes these households increase the acreage they farm through sharecropping. Like poor households, they rely heavily on loans and credit before and during the agricultural season; however, because they own most of their land they are able to keep or sell more of their harvest. Most of these households own 1-3 buffalo, and only some only small ruminants.	59,000	
	Larger-scale landowners/ landlords. These households own larger tracts of land (often *very* large tracts of land) than smallholder farmers. They may manage some of the land themselves, but much of it is occupied by tenant farmers who pay them with a portion of their harvest. These households own larger herds of livestock, mainly buffalo.	21,000	
TOTAL		212,000 flood-affected households	

Landless households depend almost exclusively on the market for wheat flour. They tend to buy wheat flour in small volumes and buy on credit when they do not have the cash available. Farming households all rely primarily on their own production for wheat flour but purchase from the market after the stocks from the previous year run out, usually 7-8 months after the harvest, later for larger-scale producers. Tenant farmers are much more likely to purchase wheat flour on credit and in small volumes. Despite the prevalence of wheat in Ghotki and Sanghar, most households also incorporate rice into their diets, especially in the hunger gap period, before the wheat harvest.

Seasonal Calendars

The agricultural calendar in Ghotki and Sanghar is dominated by the wheat crop, which is planted in October-December and harvested in March-May. Partly because many households use a large portion of the harvest to repay debts, the volume of wheat kept in household stocks is generally only enough to last for six to eight months, running out sometime between October and December. Some households with access to land cultivate rice during the rainy season, harvesting it in September, though the amount produced is modest and supplies the household only for 1-3 months. Therefore the normal hunger period lasts from December until the wheat harvest, several months later; during this time, poorer households purchase wheat flour from village-level retailers, buying on credit if they lack cash. The price of wheat flour increases slightly throughout the year, from 900-1100 PKR for a mund (a 40 kg sack and the standard unit of measure for grains in Sindh) at harvest time to 1200-1500 PKR/mund later in the year, when markets are less saturated.

Table 3: Seasonal Calendar: Wheat Flour, Districts Sanghar and Ghotki, Sindh, Pakistan

Seasonal Calendar: Wheat Flour, Districts Sanghar and Ghotki, Sindh, Pakistan												
Activity	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Wheat Cultivation				Har-vest						Preparation/ sowing		
Rainy season			Light rain				Monsoon					
Periods of peak labor - wheat cultivation				Har-vest						Preparation / sowing		
Periods of peak labor - non-farm												
Stocks from previous season's harvest consumed at HH level												
Hunger period												
High prices of wheat flour												
Low prices of wheat flour												
Peak months of social activities												
Flood season												

Ghotki	Sanghar	Ghotki and Sanghar

Section 5: Market-system maps and Analysis

Reference Time (August 2014)

Wheat is the dominant crop and the main staple food in Ghotki and Sanghar, and both districts consistently produce it in surplus. August comes 3-5 months after the harvest, when stocks from the previous season's production are still plentiful at the household level. Most of the population relies exclusively on these stocks in August, except for landless households, who purchase their wheat flour from the market year-round.

Agricultural practices are quite industrialized, with all farmers, regardless of their wealth, using inputs such as fertilizer and pesticides, along with tractors, for land preparation and management. However, while **large-scale landowners** generally own tractors and can afford to buy inputs outright, the **smaller-scale landowners** and especially **tenant farmers** generally "purchase" these inputs and services on credit, both from retailers at the district-level market and from wealthier landowners. Because of this, as much as 50% of the wheat that they produce each year is given directly to their creditors as repayment for their loans. These poorer households keep most of the rest for their own consumption, though some also sell a portion in order to access cash; smallholder farmers normally sell much more than tenant farmers, both in terms of net volume and as a percentage of overall production. Poorer farmers normally sell to local mills or retailers, whereas larger-scale producers sell to government **district food controllers** or directly to **large flour mills.** Larger-scale landowners produce much more substantial volumes of wheat and receive additional stocks from their tenants. During the months when stocks from their harvest have run out, farming households purchase pre-ground wheat from retailers at larger markets within the district.

Wheat is ground into flour before it is eaten, almost always at **small-scale mills** (locally known as **chaki**), for a modest fee and sometimes a small amount of flour. Some **chaki** operate essentially as service providers and are not involved in actual trade of wheat flour, while those with storage facilities keep stocks on hand and essentially double as retailers. They are constrained by their lack of capital, which is exacerbated by the frequency with which their customers pay for goods and services on credit.

Retailers in larger villages and district markets are the main suppliers of market-sourced wheat flour for poor and middle-off rural households in Sanghar and Ghotki. They buy wheat flour from wholesalers at one of the larger markets in the districts and hire local transport such as rickshaws to deliver it to their shops. They purchase as much stock as possible during harvest time, though they are limited by their finite capital and storage capacity. Because many poorer households lack much cash, village retailers often sell small quantities of wheat flour to them each time and/or sell on credit. They have limited capital themselves with which to restock and sometimes take loans either from suppliers or from friends.

Wholesalers operate only in the most important market towns in each district. They purchase their stocks from large wheat mills following the harvest and store it in warehouses, normally storing enough to meet the demand within the district until the next year's harvest, though if they miscalculate, or if demand increases, they can always import stocks from Punjab Province. Like retailers, they regularly buy and sell on credit. Wholesalers typically buy and sell wheat flour in munds, the local term for sacks of 40 kg.

Most **larger-scale wheat mills** operate in the areas surrounding the district-level markets. These mills buy wheat both from mainly from district food controllers at a price fixed by the government, though they also purchase some directly from large-scale farmers. Some of this wheat flour is then exported out of the district, though unfortunately the PCMMA team could not determine how much. The remainder goes to wholesalers that supply the district, at a price fixed by the government.

Because virtually all wheat produced in Ghotki and Sanghar districts that enters the market system goes through these large mills, they offer perhaps the best opportunity to estimate the market's capacity during the harvest season. Based on a conservative interpretation of the data collected during the study, there are approximately 50 large mills in the two districts that each sell an average of a million kg of wheat flour per month, for a total of 50 million kg sold within the districts every month. To put that in perspective, that is 25% more than the standard monthly requirement of wheat flour for *all* households in the two districts, and many of those households rely on their own stocks of wheat flour, and not the market, for most of the year.[12]

The final player in the wheat flour market chain is the **district food controllers**, whose agents purchase wheat from large producers at fixed prices and maintain strategic stocks for food security that they sell to mills and various-size retailers throughout the year. Because wheat is the dominant staple food, the government considers it essential to food security and therefore regulates the wheat market heavily. The government sets a target for wheat stocks in districts for each year and, every September, the buying price for the following year's wheat crop. The price for the 2014-15 wheat grains was PKR 1300 per 40 kg, or 32.5 PKR/ kg. In times of wheat shortage, the government increases regulations and controls over the wheat market system. Most of the purchased wheat stocks are held in government storage facilities controlled by the federal Pakistan Agricultural Storage and Services Corporation (PASSCO).

Crisis Time (August 2010/11)

The 2010/11 floods impacted the wheat flour market system in two main ways. First, they destroyed considerable volumes of wheat flour stocks all along the market chain, but especially at the household level. The extent of the damage varied widely depending on the village's location, but in some cases entire communities lost their remaining flour stocks, which would have fed them for 4-5 more months. Some wholesalers' stocks were also badly affected because they were not in flood-proof facilities, and the wheat in two government storage facilities in Sanghar was also partially damaged. Overall supply in the district was reduced, and exports out of the district were halted. Activity at small-scale mills, or chaki, declined by 30-75% following the floods, since rural households had far less grain to grind into flour.

The floods also damaged and blocked transportation and storage infrastructure, which inhibited resupply of wheat flour. This was a mere annoyance to many wholesalers and retailers, who had to cope with higher transportation costs and slightly longer restocking times, but it was devastating to some members of the rural population, who lacked physical access to markets for a month or more. Some village-level mills were also damaged. Because of the transportation difficulties and relative shortage of stocks, the price of wheat flour increased throughout the market chain, though only by about 5-20%.

Many market actors in the wheat flour market system fell into greater debt as a result of the 2010/11 floods. All consumers were obviously impacted as well; they had greater expenses than usual overall and became much more reliant on the market for their wheat flour supply than in a normal year. Particularly for the poorer households, who had minimal resources with which to purchase wheat flour, this created a significant gap. Almost all vendors interviewed reported a significant increase in customers purchasing wheat flour on credit, which also created cash flow problems for them and inhibited the recovery of their businesses.

A number of NGOs launched large-scale food distribution programs following the 2010/11 floods to help meet this gap, through a range of modalities, including in-kind distribution of rice and/or wheat flour, cash and vouchers. Where cash and voucher programs had occurred, several vendors reported that their

[12] Based on total population estimates of 2 million for Sanghar and 1 million for Ghotki District, an average household size of 7 and a standard monthly ration of 90 kg/ wheat flour per household.

volumes sold had actually *increased* from before the floods. Meanwhile, the existence of in-kind programs may help to explain why demand did not increase dramatically following the floods.

Future floods

Because there have been no reported changes in relevant government policy or large-scale improvements to storage, transportation or flood control infrastructure since the floods, it seems that the wheat flour market system in Ghotki and Sanghar will respond in a similar fashion should a comparable flood occur in the future. Likely impacts include the following:

- Access to markets reduced for all market actors (including consumers) within the districts because of flooded and damaged roads and bridges.
- Increase in demand for wheat flour from the market system due to damages to wheat stocks throughout the market chain.
- A slight (5-20%) increase in the price of wheat flour.
- To access cash, many landless households and tenant farmers are likely to sell their livestock and/or take loans. Many are still recovering from asset loss/debt from 2010/2011 floods.

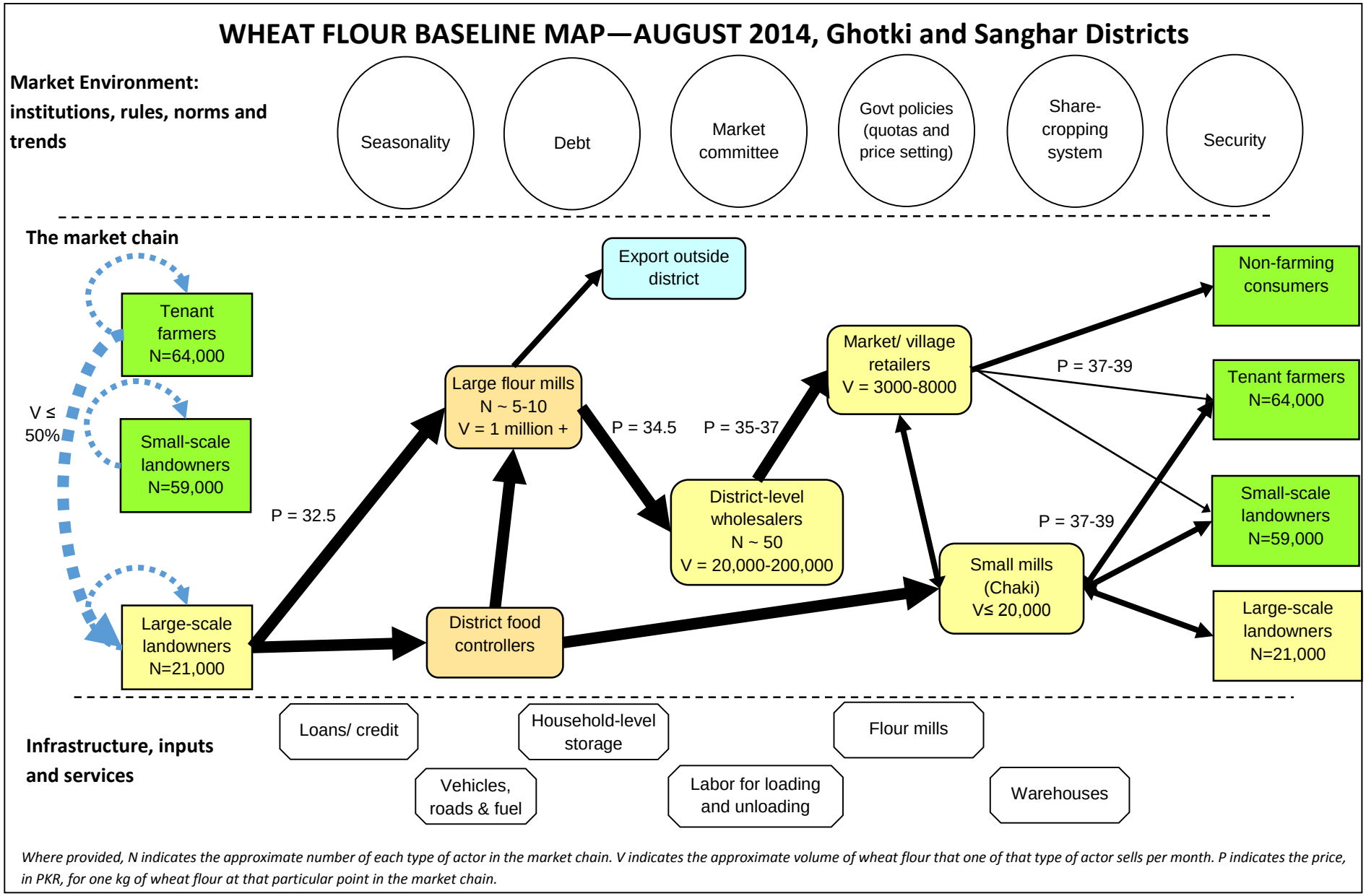
Response to Key Analytical Question #1

How is the critical market behaving today, and how will it behave during the flood emergency?

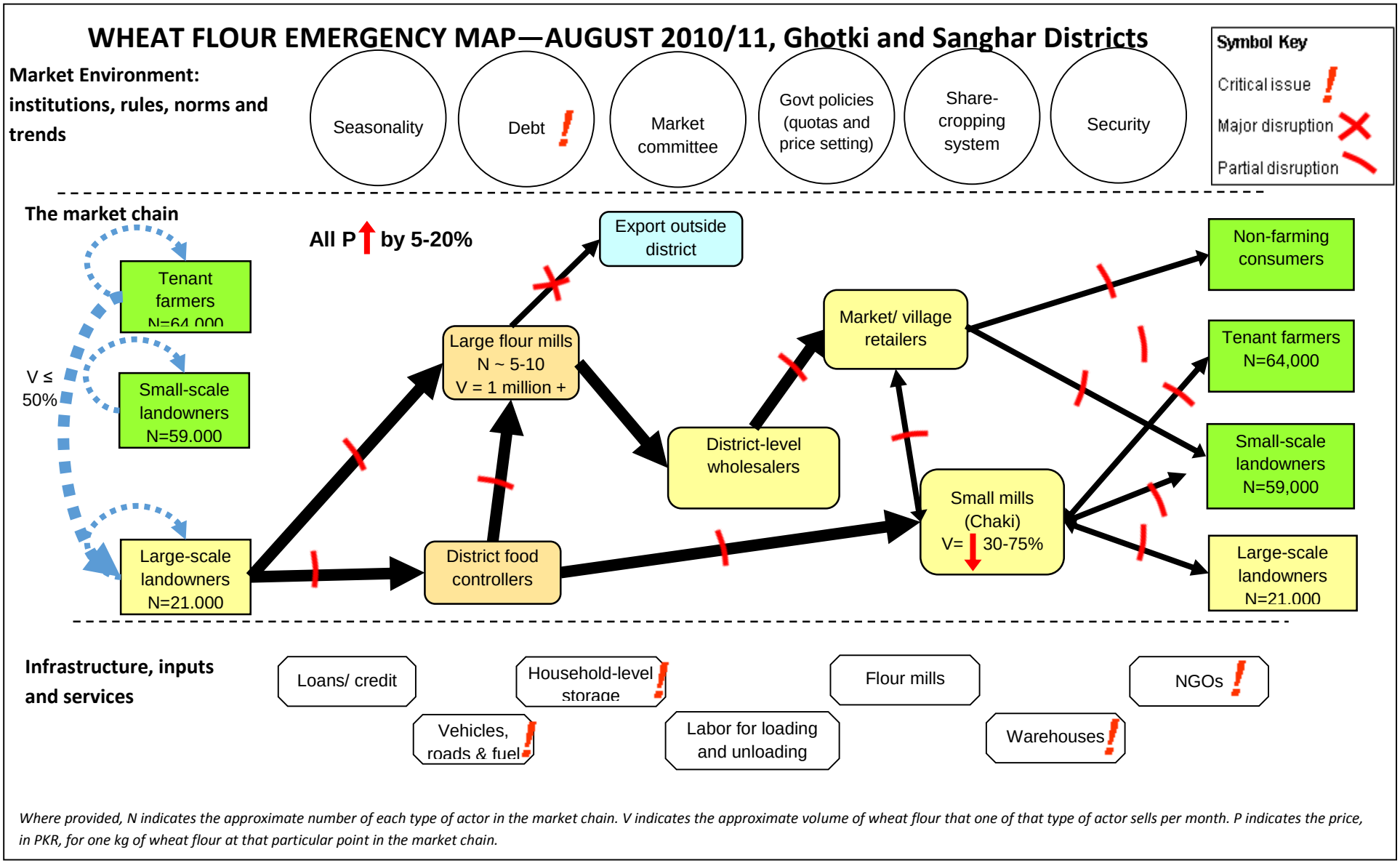
Though there are significant and complicated social issues and vulnerabilities related to the system of sharecropping and the constant debt in which many market actors operate, in non-flood times the wheat flour market system in Ghotki and Sanghar is otherwise fairly robust, with production and capacity levels that exceed local-level demand. The market is competitive and integrated, with little variation in prices along the market chain and throughout the year. The findings from the PCMMA study suggest that the market could respond to a significant increase in local demand without trouble.

During a future flood emergency, the wheat flour market system is likely to respond as it did in 2010/11; that is, prices will increase slightly, due to both transport issues and also to the destruction of wheat flour stocks throughout the market chain. Nonetheless, stocks within the district are likely to be adequate to meet the district-level demand for wheat flour for several months, provided that affected households are somehow able to access those stocks.

WHEAT FLOUR BASELINE MAP—AUGUST 2014, Ghotki and Sanghar Districts



Where provided, N indicates the approximate number of each type of actor in the market chain. V indicates the approximate volume of wheat flour that one of that type of actor sells per month. P indicates the price, in PKR, for one kg of wheat flour at that particular point in the market chain.



Where provided, N indicates the approximate number of each type of actor in the market chain. V indicates the approximate volume of wheat flour that one of that type of actor sells per month. P indicates the price, in PKR, for one kg of wheat flour at that particular point in the market chain.

Section 6: Comparing the gap in needs with the market capacity

As mentioned, wheat flour is the principal staple food for the population of Ghotki and Sanghar Districts. Households rely on their own production for as much of the year as possible, and most farming households still have stocks from the previous season's wheat harvest in a normal August. Table 4 summarizes the consumption of wheat flour of the different target groups for this study during August 2014, estimated as accurately as possible based on the field research. 90 kg was determined to be the standard amount needed to sustain a family of 7 for one month based on the standard WFP food ration used during past floods; this largely corresponds to the amounts most households claimed to be consuming.

Table 4: Gap Analysis of the target population, baseline (August 2014) – all volumes in kg

Type of HH	Number of HH	Amount of wheat flour needed per HH	Amount provided from own sources (own production, purchase and borrowing)	Short-fall	Total gap (all HHs)
Landless/ daily workers	68,000	90	90	0	0
Tenant farmers	64,000	90	90	0	0
Small-scale landowners	59,000	90	90	0	0
Large-scale landowners	21,000	90	90	0	0
Total	**212,000**	**n/a**			**0**

Though August is a month of relative abundance in Sindh, it is worth noting that most poorer households rely on negative coping strategies like selling productive assets, taking loans or buying on credit in order to access a portion of their wheat supply at other times of the year (normally for 4-5 months prior to the wheat harvest); though they are able to increase their caloric intake this way, increased debt compromises their future food security and livelihoods, as subsequent earnings and/or harvest will have to be used to repay the debt. Those who sell livestock may be less able to cope with future shocks. All categories of households seem to be able to access the amount of wheat flour that they need during a normal August; that said, their heavy reliance on debt in order to access wheat flour throughout the year highlights the deeply entrenched nature of poverty in these parts of Sindh.

During the 2010/11 floods, because of displacement and significant losses to household-level stocks, farming households became much more dependent on the market for wheat flour for the months of August-December. The floods also caused widespread damage and destruction to household assets like shelters, livestock and farming equipment, representing additional costs for affected households and reduced means with which to meet basic needs. Agricultural activities that would normally provide wage earning opportunities for landless households were interrupted, cutting off the principal sources of income for this time of year. As a result, all affected households became more reliant on loans/buying on credit, donations from landlords and outside NGO assistance to access wheat flour. As mentioned previously, NGOs launched massive food distribution campaigns in 2010/2011, and indeed most of the villages interviewed during this assessment benefited from food aid, ranging from packages of grains, oil

and pulses to hot meals to small sacks of rice. Some households said that, though they were in need, they were not able to access NGOs in order to register as beneficiaries because of the severe flooding. From the data gathered, it was unfortunately not possible to generalize about the type and volume of aid received per category of household, and therefore this information is not provided in the emergency gap analysis table (Table 5). When provided, food assistance was distributed for a period between 1 and 3 months.

Table 5 summarizes the gap analysis for flood-affected households in Ghotki and Sanghar districts during the 2011 floods, based on our best interpretation of the very rough data gathered during this assessment. What is clear is that many households struggled to access staple grains, and that in order to pay for wheat flour following the floods, many relied on negative coping strategies, such as selling valuable livestock, which have had lasting negative repercussions on their economic well-being. Many are still in worse debt than they were before the floods, and many have not rebuilt their livestock herds to pre-flood sizes. The poorest households, including both the landless and tenant farmers, faced the largest gaps, and the gaps lasted between 4 and 6 months.

Table 5: Gap Analysis of the target population, emergency (August 2010/11) – all volumes in kg

Type of HH	Number of HH	Amount of wheat flour needed per HH	Amount provided from own sources (own production, purchase and borrowing)	Short-fall	Total gap (all HHs)	Duration of gap (in months)	Preferences for aid
Landless/ daily workers	68,000	90	60	30	2,040,000	4 to 6	no clear preference
Tenant farmers	64,000	90	60	30	1,920,000	6	cash or vouchers
Small-scale landowners	59,000	90	80	10	590,000	4 to 6	cash
Large-scale landowners	21,000	90	90	0	0	0	n/a
Total	**212,000**	**n/a**			**4,550,000**	**n/a**	

Most households interviewed indicated a preference for cash or voucher assistance rather than in-kind support in the case of a future flood, though this was not universal. Many households seemed to feel that unconditional cash was somehow risky because cash could be spent on items aside from food, though of

course, from another perspective this is actually an advantage of the modality, provided that those non-food uses of cash relate to even more pressing basic needs.

Response to Key Analytical Question #2

Will the affected population be able to continue to access the needed volume and quality of goods from the critical market system during the emergency?

The wheat flour market system in Sanghar and Ghotki should be able to provide the needed *volume* of wheat flour during and after the flood emergency. Though some wheat flour in government, wholesale and market-level storage facilities may be damaged during the floods, there will likely be sufficient stocks in other areas of the districts not affected by the flood, provided that exports for that year are cancelled, as they were in 2010/11.

However, the flooding will likely lead to massive damage to and blockages of key transportation infrastructure that will impede the movement of rice from one part of the district to another and that will affect the entire market chain, from large mills to market retailers to tenant farmers. These serious transportation challenges must be addressed if the market is to effectively supply the flood-affected population with the wheat flour that they require during and after the flood.

Section 7. Main Findings

Key actors	Key Findings	Implications for response
Poor consumers (including landless households)	*Although wheat is thought of as the dominant staple food in Ghotki and Sanghar, most households also consider rice a staple food, and some actually prefer it*	*Ideally, humanitarian responses to floods should provide households with the option to choose among wheat and rice in the rations that they prefer*
	The negative coping strategies of selling livestock and taking additional debt that these households adopt following floods increase their financial vulnerability for years to come	*Agencies should help to ensure that vulnerable households' basic needs are met while minimizing reliance on negative coping strategies*
Small-scale producers (Tenant farmers and smallholders)	*Tenant farmers operate in perpetual debt to landlords and vendors, even in non-emergency years*	*Long-term, more development-oriented programming is needed to address the chronic nature of poverty in Ghotki and Sanghar*
Large-scale landowners	*These actors benefit the most from the current feudal system, as they control the means of production, including much of the land*	*Any long-term poverty eradication program must recognize the power dynamics of agriculture in Sindh and find ways to transfer some power to smaller-scale farmers*
	Large-scale landowners also suffer financially during floods, since the many people who owe them money or goods cannot repay them	*Agencies should examine to what extent landlords are still able to provide crucial inputs to smallholder farmers following floods and should consider helping to fill gaps if necessary*
Village mills	*Village mills suffered during the floods due to loss of stocks, damage to infrastructure and a drop in demand*	*Agencies should help to "flood-proof" village mills' storage and may want to consider helping them repair/ rebuild damaged machinery*
Retailers and wholesalers	*Most retailers and wholesalers reported being able to supply the same volume of wheat flour after the floods as before the floods, and even increase their supply, with only slight delays*	*Where and when practical, retailers and wholesalers should be included and supported as vendors in market-based humanitarian response programs*
Learning from past seasons	*Cash and voucher programs in the 2010/11 flood response were not always effective because NGOs struggled to reach the worst-affected households during the first month(s) of the floods*	*Cash and voucher programs may not be appropriate during the early days of the flood*
		NGOs should explore how transportation infrastructure can be supported in order to help restore market function expediently during and after floods
		There is a great deal of potential for preparedness programming that helps ensure access to particularly vulnerable geographic areas
	The food rations provided during the 2010/11 response, though helpful, were not enough to meet the consumption requirements of vulnerable households, nor did they continue for the full period of time that households experienced a food gap	*Rations should be increased to the full standard amount, especially for poor and very poor households, and should continue for 4-6 months, or until it is determined that there is no more need*

Section 8: Main recommendations

Response recommendation	Responsible	Key risks and assumptions	Likely effect of the intervention on the market system and target group	Timing issues
Mapping of key market access routes and evacuation points; communication of this information to flood-affected populations and market actors.	NGOs and government, logistics cluster	NGOs and government have time and resources to contribute and will work cooperatively on mapping. Some routes to district-level markets remain relatively accessible even during bad floods. Information will be effectively communicated to the people who need it in a timely fashion.	Some affected households will have easier access to markets and/or to needed wheat flour supplies even during bad floods. Vendors and transporters will be able to resupply more efficiently, especially at the start of flooding.	Should be completed at least 1 month before floods begin.
Support to vendors and government to improve and possibly relocate storage facilities at the market, wholesale and government warehouse levels	NGOs and government	Large-scale infrastructural improvements could be quite costly. Cost-effective and effective designs for rural villages can be found Rural households will be amenable to new storage designs	Fewer losses of wheat flour district-wide, and greater availability of wheat in markets in the flood-affected area	Begin 4-6 months before floods to allow sufficient time
Longer-term development programs for poor and very poor households aiming to increase their access to and control of agricultural inputs (e.g., cooperatives)	Local and international NGOs with expertise in long-term development	Capacity exists to design and implement quality agricultural cooperative programs or similar. Programs will be funded adequately, and small-scale farmers will be motivated to participate in programs.	Could lead to a gradual but steady reduction in debt and increase in wealth among small-scale producers.	Long-term project (3-5 years minimum), to be started during non-flood times
Advocacy to food security actors for consistent adherence to a food ration that takes household size into account and provides the full caloric requirements for cereals, especially for	NGOs in the food security cluster, relevant government authorities	The FS cluster will accept this as a topic for debate.	Flood-affected households will rely less on negative coping strategies during floods.	2-3 months before an expected bad flood season

poor and very poor households (100 kg/family of 7/month)				
Provision of locally-procured wheat flour to flood-affected households for the first month of flooding, followed by unconditional cash grants to same households.	NGOs and WFP	The government will allow for the distribution of unconditional cash grants. Cash will be used for food and other basic needs and not for repaying debts or other purposes. Effective and reliable transportation solutions that are acceptable to market vendors can be found.	Flood-affected households will access sufficient wheat flour for their consumption needs until the following wheat harvest. Wheat flour vendors at the district market and village levels will resume their normal business activities and be able to resupply quickly.	In-kind support for the 1st month, followed by cash support for at least 2 more months. If funding allows, cash + transport support should be continued for 2-4 more months, through the wheat harvest, though the amount distributed could be reduced.

Table 6 presents the key recommendations that resulted from the PCMMA's findings and implications. For the full list of response options considered, see Annex D. This table directly responds to Key Analytical Questions 3 and 4; the fifth recommendation addresses market-sensitive programming options, while the first three recommendations suggest ways to reduce the potential impact of floods on the market system. Each recommendation is explained in further detail here.

There are numerous actions that should be taken before the onset of floods in order to reduce the impact of those floods on the population of Ghotki and Sanghar Districts. The first of these is a mapping and communication exercise. Certain transport routes and land areas are more vulnerable to flooding than others; these should be mapped out and designated gathering places and transport routes identified. This information should then be disseminated to market actors and populations living in expected flood zones. This activity should be a joint effort between the logistics cluster and the government, which have the best macro-level knowledge of supply routes and the ability to map them, and NGOs, who can gather more community-level information. If the district-level government is willing and able to lead this effort, it should, with input from the other two actors; otherwise, a group of NGOs operating within Badin may want to take the lead. Information about designated transport routes should be disseminated at district-level markets through locally appropriate means; information about evacuation sites should be shared with affected villages via NGOs and/or radio broadcasts or other appropriate means.

Improving the quality of storage facilities along the market chain is an essential part of reducing the impact of future floods. Precise interventions will look different depending on the level of intervention; for example, low-cost appropriate technology and fairly strong involvement in the construction process may be needed for village-level storage, whereas targeted advocacy may suffice at the district food controller level. Because these interventions may take quite a long time, particularly at the larger scales, they should be launched well in advance of flood season.

While longer-term agricultural development/poverty eradication programs go a bit beyond the scope of this study, they are necessarily to ultimately address the underlying power inequality in agricultural production in Sindh Province and thereby reduce the vulnerability of small-scale farmers to shocks. Further reflection by agencies with expertise in the development of farming cooperatives and value chain development will be necessary to flesh out the details of such of program. The goal would be to make smallholder farmers more self-sufficient in terms of agricultural inputs in order to decrease their debt levels and increase the amount of the harvest with which they can improve their standard of living.

The third recommendation involves advocacy at the food security cluster to establish adherence to a fixed standard monthly ration of 90 kg of wheat flour per 7-person flood-affected household per month for sharecropping and landless households. While this standard existed during the 2010/11 floods, apparently it was not always respected, with serious repercussions for flood-affected households. This essentially means that humanitarian actors would commit to providing the complete caloric requirements for the poorest households in emergencies, so that these households can avoid practicing negative coping strategies that could compromise their economic well-being for years to come. If resistance is encountered for whatever reason, advocacy efforts should still aim to increase the standard ration as much as possible towards 90 kg per month. This discussion should take place in the months leading up to an anticipated flood season.

The final recommendation involves a two-pronged emergency response that utilizes and supports the wheat flour market system in Ghotki and Sanghar. Because of the immense access challenges at the height of a flood, in-kind provision of wheat flour to the most vulnerable households (rather than a cash-based response) is recommended for the first month or so; however, this wheat flour should still be procured within the local district, from wholesalers who have adequate stocks remaining from the previous season. Transportation of the flour to affected households will be challenging but will be managed by humanitarian actors. During this initial month, however, preparations should be underway to transition from in-kind distribution over to unconditional cash grants. Discussions should be initiated with retailers at the district-level markets to assess capacity and determine whether support is needed for resupply, whether through the temporary contracting of flood-appropriate delivery vehicles or through cash grants to retailers so that they can manage the contracting themselves. A needs assessment should be conducted during the second month of cash distribution to determine the need for continued cash support; following this assessment, the distribution level should be adjusted or terminated as appropriate. It is expected that households will be in need of some level of humanitarian support for rice until the wheat harvest in March-May of the year following the flood.

Annex

Annex A: PCMMA Team Member List

Name	Organization	Job title	Critical Market Team
Gregory Matthews	IRC	Senior Technical Advisor for Livelihoods	Assessment Leader
Emily Sloane	IRC	Emergency Markets Officer	Assistant Assessment Leader
Muhammad Attiq	IRC	Head of Office, Sindh Province	Markets Focal Point
BADIN DISTRICT			
Juergen Mika	WHH	Emergency Response Coordinator	water - **TEAM LEADER**
Muhammad Ali	ACF	Survey DPM	rice - **TEAM LEADER**
Sajan Dass	IRC	Sr. Training Officer	rice
Waqar Ali	Oxfam	MEAL Officer	fodder
Khalid Khan	ACF	Nutrition Surveys Data Analyst	water
Naseem Khan	Oxfam	DPM EFSL	fodder
Zeeshan Ahmed	ACTED	Community Mobilizer	rice
GHOTKI DISTRICT			
Muzafar Hussain	IRC	M&E Manager	fodder - **TEAM LEADER**
Ayaz Lakho	HWA Foundation	P.O.	water
Hafiz Manzoor	HWA Foundation	CEO	wheat flour
Himat Ali	Takhleeq Foundation	A.C.C.	fodder
Wasim Kolachii	Takhleeq Foundation	District Coordinator	fodder
Asif Imdad	IRC	Database Assistant	water
SANGHAR DISTRICT			
Khan Zada	Concern WW	Cash Project Coordinator	wheat flour - **TEAM LEADER**
Mehar Ali	IRC	Cash Transfer Officer	wheat flour
Nizakat Ali	IRC	Sr. CMO	fodder
Fida Hussain Bozdar	IRC	Community Mobilization Officer	water
Raza Ali Daudpota	RWF	Databar Officer	fodder
Umair Said	CARE	FSL Monitoring Officer	fodder

Annex B: Summary of interviews conducted, wheat market system PCMMA

Type of interview	Location of interviewee		Number of interviews
	District	Town/ Village	
Household	Sanghar	not specified	10
	Ghotki	Abdullah Mirani	2
		Habibullah Chachar	2
		Dolatpur	1
TOTAL, Household interviews			**15**
Vendor	Sanghar	Sanghar City	4
		Tando Adam	1
		Jamal Faqir Khaskheli	1
		Jhol	2
		Dalor Mori	3
		Khairo Kaloi	1
		Rukan Burira	1
	Ghotki	Lakha Mohala	1
		Saeedu Chachar	1
		Galla Mandi	2
		Ghotki	2
		Hussain Beli Road	1
TOTAL, Vendor interviews			**20**
Focus Group Discussion	Sanghar	not specified	3
GRAND TOTAL, Interviews Conducted			**38**

Annex C: TOR for the PCMMA in Pakistan

Pakistan Pre-Crisis Market Mapping and Analysis PCMMA Terms of Reference

Assessment dates: May 18-June 3, 2015

Host agency: International Rescue Committee

Participating agencies: This will be a multi-agency endeavor to which staff from selected NGOs that operate in the assessment area will be invited to participate. Please express interest in participating in this PCMMA by contacting Emily Sloane, Emergency Markets Officer, IRC (Emily.Sloane@rescue.org)

PCMMA Overview and Objectives:

The Pre-Crisis Market Mapping and Analysis (PCMMA) is a practical, step-by-step resource to guide market analysis practitioners and team leaders to conduct market assessments prior to emergencies in order to anticipate how markets will respond after a shock occurs. The PCMMA was developed in 2014 by the IRC and Oxfam with the support of the European Union through the Enhanced Response Capacity Mechanism and the American People through the United States Agency for International Development (USAID), and builds on earlier experiments with market baseline mapping and analysis conducted in pre-crisis settings. Although based loosely on the EMMA methodology, the PCMMA does not replace existing market analysis tools, rather it is intended to provide a guide to applying those tools in pre-crisis contexts, particularly in contexts that are prone to recurring humanitarian crises.

PCMMA is designed to help agencies to improve preparedness, feed into contingency planning efforts and contribute to the design of disaster risk reduction programs by identifying certain parts of market systems which may be vulnerable to shocks. Increasing the speed of emergency responses or strengthening market systems ahead of emergencies would potentially reduce the disaster impact on lives and livelihoods, and begin to address the longer term or chronic nature of poverty and vulnerabilities. As it is still a relatively new approach, the IRC has devoted resources to conducting three pilot PCMMA assessments in disaster-prone countries in 2015 in order to generate learning that can be used to refine the approach and the guidance document, while providing information that can help various humanitarian agencies' strategic and operational planning efforts. The pilots will also serve as opportunities to develop market analysis capacity within the humanitarian community.

In Pakistan, monsoon-related flooding leads to humanitarian crises of varying scale on an almost annual basis, at the bottom of the Indus River basin. Since 2010, flooding has adversely affected at least half a million people *per year* in Sindh Province, located at the bottom of the Indus River Basin. Some years are particularly devastating; 2011 saw almost 5 million Sindh residents affected. Flooding destroys crops, livestock and agrarian infrastructure and in a highly agriculture-dependent region, results in loss of human life and damages homes and public infrastructure. Thus far, markets have by and large managed to continue supplying goods following floods, albeit at inflated prices.

The IRC has actively responded to flood-related humanitarian crises since 2010 in the FSL, WASH and Health sectors, and will continue to do so in the future. In 2010, the IRC participated in a multi-agency EMMA exercise in Sindh with an eye to developing more market-aware programming. This PCMMA will build on that effort to help identify ways to help prepare markets and residents to better withstand floods in the future. This PCMMA will focus specifically on those markets that are critical for supporting the basic needs and livelihoods recovery of vulnerable Pakistani people whose lives may be disrupted by future flooding.

The objective of the analysis will be to identify appropriate market-based programming options for emergency and longer-term basic needs and livelihood assistance for both IDP and host community populations alike. The analysis will focus on identifying both direct programming options targeting IDPs or host community members as well as indirect responses targeting key market actors to improve capacities to provide basic needs and livelihoods opportunities to IDPs and host community families. The specific market systems to be analyzed during the assessment will be determined based on inputs and level of interest from participating agencies, feasibility of undertaking the analysis and potential programming, and appropriateness to the context in Pakistan. The exercise will further explore ways to better integrate gender considerations in the emergency market assessment process.

Main Objectives:

- To identify through a pre-crisis market analysis appropriate responses to meet early livelihood recovery and other basic emergency needs, with a particular emphasis on market support activities.
- To strengthen the market analysis capacity of both national and international IRC staff and of relevant members of the broader humanitarian community
- To build the IRC's experience in applying market analysis to response analysis and design within contingency planning
- To generate substantive, practical learning on how to integrate gender into market analyses

Desired Results of the PCMMA

- Market Maps of selected critical markets
- Seasonal calendar for critical markets
- Report of key findings and recommendations for each critical market system analyzed
- Brief report on learning related to the PCMMA approach and guidance document and on the integration of gender in market analysis

Key findings and recommendations will be presented widely at the close of the assessment. Presentations by assessment team members at field and Islamabad-level coordination structures will be encouraged, and the final reports will be made available online through the UNHCR Web portal, EMMA website (emma-toolkit.org), and the Markets in Crises Dgroup list serve.

Geographical Area of Assessment

The PCMMA assessment will take place in district and sub-district-level markets in selected areas of Sindh Province that are likely to be affected by future flooding. Specific locations and markets to be assessed will be identified in further consultation with both the country team and the different agencies participating in the exercise.

Critical Markets for Analysis

Due to the logistical, financial, and analytical limitations, the number of critical markets to be analyzed during this exercise will be limited to 3 different market systems. Before the start of the PCMMA, participating agencies will decide on 2 to 4 critical markets to be the focus of the fieldwork and analysis. The type of critical markets to analyze depends on the sectoral interests of participating agencies and the number of participants available to partake throughout the

assessment process. If necessary, different critical markets can be selected for different parts of Pakistan based on the specific market realities in each geographical area.

Potential market systems for analysis include:

- Construction materials
- Manual labor (agricultural and/or non-agricultural)
- Agricultural inputs (e.g., seeds for key crops)
- Staple food items
- Livestock

Assessment team members

The assessment team composition will reflect the fairly ambitious scope of the exercise. The assessment will be co-led by two technical staff from HQ. It is expected that 10-20 additional people will participate in the exercise; these people will be divided into 2-3 sub-teams to analyze the specific market systems identified. Each critical market team will be led by a critical market team leader and a national or expatriate mentee (to be identified by ERD staff). Market team members should have a good understanding of humanitarian programming and basic market principles, analytical and writing skills and experience with field-level data collection. Crucially, a member of IRC's Pakistan country team will serve as a market focal point leading up to and during the exercise; this individual will oversee the country team in preparatory analysis before the assessment and will apply his/her local knowledge to assist guide the assessment design and data analysis and interpretation processes. Finally, a gender specialist from the IRC's HQ will participate in the assessment to ensure that gender-related learning objectives are met.

Each market-specific sub-team will be expected to analyze assessment data and to prepare a draft report of findings and recommendations in line with the PCMMA Methodology (see below). Significant support for this analysis will be offered by the critical market team leaders; however staff or personnel participating in the assessment must be strong in data analysis and capable of writing complete assessment reports independently.

Having previously attended an EMMA training is not a requirement to participate in this assessment, but previous market analysis training or experience is highly desired. The training and facilitation will take place in English.

Agencies interested in participating in the PCMMA are asked identify staff members to be a part of the assessment. Agencies and individual staff must be willing and able to commit to being a part of the PCMMA team for the duration of the assessment, including pre-assessment training, field-based data collection, and analysis stages of the process. Additionally, agencies providing staff are asked to cover the costs of personnel (including salaries, per diems, etc.) and contribute to logistical support for those personnel (communications, vehicles and fuel, field overnights, etc.).

Duration of assessment and working Hours

- 18 days from mid-late May 2015. Please see schedule below.
- Participants should anticipate long working hours and be prepared to work outside normal business hours.
- All participants should agree to work the length of assessment, without a break if necessary to complete the work on time. Team members should expect to work weekends. Please inform us immediately if this is likely to be difficult or if there are any outstanding issues that need addressing.

Methodology

The assessment will use the methodology in the PCMMA guidance document, comprising 15 steps. To the extent possible, Steps 1-6 will be conducted before the full field team assembles in country. While a plan for Step 13 will be outlined during the PCMMA, it will be the responsibility of in-country staff to ensure that monitoring continues after the official exercise ends.

1. *Understanding the context*	Identify the likely crisis scenario; target population needs & profiles
2. *Setting scope and objectives*	Set objectives and operational questions for PCMMA; identify knowledge gaps; ensure relevance of PCMMA
3. *Ensuring managerial and organizational buy-in*	Determine composition of assessment team, including Market Focal Point; identify and confirm availability of in-country resources needed for assessment; secure country team management approval of the exercise and resulting potential response strategies; confirm that results will be integrated into contingency planning
4. *Critical market selection and key analytical questions*	Pre-selection of critical market-systems; identification of draft key analytical questions for each system; select geographic area to be covered by the assessment
5. *Mapping and gathering existing information*	Gather information on selected critical markets, target groups, livelihoods in assessment areas; identify information gaps
6. *Preparing and planning for the market assessment and analysis*	Confirm team composition; develop timeframe and draft agenda; set budget; finalize TOR
7. *Finalizing the frame of the analysis*	Review and validate steps 1-6 with full assessment team; finalize assessment locations with team; identify markets to visit and market actors to interview with team
8. *Preliminary analysis and mapping*	Production of initial profiles, seasonal calendars, maps of the market-system; identification of key informants or leads.
9. *Data collection*	Develop questionnaires; conduct fieldwork activities and regular debriefings
10. *Final mapping*	Finalize baseline & emergency maps, seasonal calendars; description of key features, bottlenecks, constraints
11. *Gap and market analysis*	Comparison of household economic profiles, analysis of priority needs, access and gaps
12. *Selection of response options*	Exploration of response options, cash and other intervention feasibility; response recommendations and their logic
13. *Market monitoring*	Determine different market indicators to monitor; develop monitoring plan
14. *Communication of results*	Prepare and disseminate results via report and in-person presentation(s)
15. *Updating a PCMMA*	Conduct follow-up assessments as needed

Communications

Most national staff have local mobile phones, and these will be used during the exercise. Team leaders will be provided with phone credit. International participants will seek the necessary SIM cards and/or will be provided phones by the IRC's Pakistan office as needed. At the start of the field work, all participant mobile numbers shall be collected and shared.

Administration and resources required:

The IRC's ERD unit will cover the cost of international travel and per diem of international IRC staff participants. It will also pay for accommodation of all international participants, including mentees, if IRC expatriate housing is not available. The agencies sponsoring any mentees involved will be responsible for the mentees' international travel and per diem while in Pakistan.

The IRC's Pakistan office will provide logistical and administrative support related to procuring visas, arranging for accommodation, training spaces, food and refreshments for the assessment team and in-country transportation. While the ERD unit has some limited funds available for in-country costs such as training supplies and transportation, these funds are insufficient to cover the full cost of the assessment, and so the country team will be asked to contribute to these needs to the best of its ability. The ERD may request documentation of any financial or in-kind contributions to the assessment from the IRC country team for donor reporting requirements.

Other participating agencies are asked to contribute staff and logistical support to defray the costs of the assessment. In addition to personnel costs (salary, per diems, etc.), the assessment will depend on contributions of vehicles, drivers and fuel from participating agencies to transport personnel for data gathering.

If your agency will be able to provide personnel or logistical support to the assessment, please indicate the level of support available when expressing interest in being a part of the PCMMA. To express interest, please contact Emily.Sloane@Rescue.org.

Tentative Assessment Schedule

Date	Agenda
1 April-16 May	Identification of assessment team; desk research and initial analysis
17 May	Assessment team arrives at training site
18-20 May	Introduction to PCMMA; training on PCMMA in practice; Developing data collection tools and preparing for fieldwork
21-28 May	Data collection at field level – household, market actor, and key informant interviews
29 May-1 June	Preliminary Analysis of field data and development of recommendations
2-3 June	Presentations of key findings and recommendations

Annex D: Response Options Framework:

	Response Option	Advantages	Disadvantages	Feasibility	Timing issues
Preparedness-focused	Support to vendors and government to improve and possibly relocate storage facilities at the market, wholesale and government warehouse levels	Fewer losses of wheat flour district-wide, and greater availability of wheat in markets in the flood-affected area	Large-scale infrastructural improvements could be quite costly.	Medium	Before flood
	Mapping of key market access routes and evacuation points	Could speed delivery and increase efficiency of food assistance, regardless of modality.	Fairly complex; requires high-level coordination and communication with government and other humanitarian actors throughout the district.	High – in line with government and NGO priorities	Before flood
	Longer-term development programs for poor and very poor households aiming to increase their access to and control of agricultural inputs (e.g., cooperatives)	Could help address the long-term nature of poverty and vulnerability in Sindh Province.	Complex and time-consuming to implement. Requires development expertise. Requires long-term funding and support for a relatively small number of beneficiaries. Could meet significant political opposition.	Medium	Before flood – very long-term project (3-5 years, minimum)
	Advocacy to food security actors for a more consistent wheat flour ration, especially for poor and very poor households (90 kg/family of 7/month)	Households less likely to rely on negative coping strategies in order to access the full quantity of wheat flour that they require.	Could be politically complex to change this standard at the national/provincial levels. Larger rations will increase the cost of the response.	Medium	Before and during early phases of flood
Response-focused	Provision of wheat flour to flood-affected households, using wheat flour procured within Ghotki and Sanghar districts	NGOs assume responsibility for supply and delivery, guaranteeing that affected households receive the needed goods in a timely fashion. Ensures that the most isolated households receive food assistance.	Logistically complex given the huge access issues during floods. Relatively expensive to implement. Appropriate when markets are not functioning and no access to markets.	High	4-6 months once flooding has started
	Unconditional cash grants to flood-affected households	Benefits for a wider variety of market actors, plus multiplier effects. Households have the choice to purchase the food (or	Local market actors may face supply/ resupply challenges. Some vulnerable households may not be able to access markets at all.	High	4-6 months once flooding has started

		other goods) they prefer and need the most.			
	Distribution of food vouchers	NGOs have slightly more control over what kind of assistance households receive.	Can be administratively complex (and therefore time-consuming) to set up and implement. Only those vendors officially registered in the program can benefit.	Medium	1-7 months once flooding has started
	Support to market vendors (especially at the district market level but possibly at the village level, later) to transport wheat flour, through cash grants and/or the provision of flood-appropriate boats/trucks	Helps the market system to resume normal operations; Facilitates a market-based response. Provides benefits to a greater range of local actors.	Could be logistically complex to organize and administer, especially in the early days of flooding. Most vendors seem to be able to manage transportation arrangements on their own without too much difficulty.	Medium	In conjunction with a cash or voucher program
	Food for work, undertaking rehabilitation of roads/bridges and dewatering of important roadways and fields.	Could ensure that flood-affected populations have access to sufficient rice while rehabilitating essential infrastructure.	Flood-affected households may have other priorities for their time during and after floods. Unclear of the lasting value of the infrastructural projects undertaken through FFW.	Medium	1-3 months once flooding has started
	Grants to small-scale mills to repair/ restore their machinery	Farmers are able to grind their grain in the usual fashion after next year's harvest Mill owners avoid going further into debt to recover their businesses	The population much prefers receiving assistance in flour form, so little use for mills until the following year's harvest.	Medium	3-4 months after the floods have started

Annex E. Questionnaires used during the Wheat Flour market system assessment

Questionnaire for flood affected Consumer/HHs

Person conducting interview:	
Who is being interviewed?	
Contact number:	
# of people in HH:	

Query	Response
1. How much wheat does your HH produce in an average year?	
2. Of the wheat that you produce, how much do you keep for own consumption?	
3. *If you are a tenant farmer:* Of the wheat you produce, how much do you give to your landlord?	
4. Of the wheat you produce, how much do you sell?	
5. Who in your HH sells the wheat produced? (men/women)	
6. Do you have a secure place to store the harvest?	
7. How long your own stock of wheat lasts and which are the months when you don't have any stocks at home?	
8. Who in your HH does most of the farm work required to produce wheat? (men/women/youth/ children)	
9. What price do you get per 40 kg of wheat at the time of harvesting time?	
10. Does the selling price vary depending on the time of year, and if so, how much?	
11. How much wheat flour does your HH require in an average month?	
12. Is your HH able to access the amount of wheat flour it needs as and when required through your own resources (producing, buying, trading)? 13. If not, during what months does this happen? How much more wheat flour would you need to get the full amount that your HH requires? 14. When and if there is a gap, how does your HH manage?	

15. If you sometimes purchase wheat flour, what is the price? How does the price vary depending on the time of year?	
16. If you have wheat, where do you grind it? Where are the mills located? 17. What is the cost of grinding and transportation to the mill? 18. During what months of the year do you grind your wheat?	
19. If your HH buys wheat flour, from whom do you buy it? Where is this actor located?	
20. Did you have stocks of wheat/wheat flour at home when the floods (2010 for Ghotki, 2011 for Sanghar) started? If yes, how much did you have, and what happened to those stocks?	
21. During the one month right after the flood (2010 for Ghotki, 2011 for Sanghar), how much wheat flour did your HH consume?	
22. Of the wheat flour that your HH consumed in that month, how much came from your own production?	
23. Of the wheat flour that your HH consumed in that month, how much did you buy?	
24. If you bought wheat flour during that month, where from did you buy it?	
25. Did your HH receive food aid during the month after the flood? If yes, what kind of food aid did you receive, and how much was it? For how many months you got this?	
26. For how many months were you in need of food assistance following the flood (even if you did not receive any assistance)?	
27. If you did not receive food assistance after the flood, how did your HH access wheat flour?	
28. If a similar flood were to happen in the future and once again your HH did not have enough food, how would you prefer to receive food assistance? (In-kind, cash, vouchers) and why?	
29. If you would prefer in-kind, would you prefer the flour or wheat grains?	

Semi-Structure Interview Data Recording Sheet

District : _____ Name of Business: _____ Name_____ Contact Number : _____

Date: May 22-30, 2015

Critical market item: Wheat Flour	**Business location:**	**Type of market actor : Vendor/whole saler**
Time period in question (e.g. one, two or three months):		

Type of information	**Curent Situation (August/September 2014)**			**Emergency Situation (2011 flood for Sanghar, 2010 for Ghotki)**		
	Quantity	**Unit**	**How often (daily, weekly, monthly)**	**Quantity**	**Unit**	**How often (daily, weekly, monthly)**
1. How much wheat flour did you sell during the different time periods?						
	Price	**unit**		**Price**	**Unit**	
2. What is the selling price for wheat flour?						
3. What was the selling price of wheat flour before the floods in 2010/11						

4. Did the prices increase or decrease in emergency during the 2011/2010 floods, why?		
5. If the same level of flooding happens again, will the prices decrease/increase the same way as 2011 Sanghar/2010 Ghotki)?		
	August/September 2014 (BASELINE)	**August/September during floods (EMERGENCY) 2010/11**
6. How much wheat flour did you have in stock during the times specified?		
7. How frequently did you need to re-order your stock?		
8. How long did it take to get the same wheat flour stock you were already maintaining?		
9. Would it be possible for double or triple stock if needed? if not why?		
10. If you can increase your stock by double or above how long would it take?		
11. Where did you purchase your supply from (who, where?)		
12. Who are your customers and where they are from?		

13. How much % of your sales is on credit?		
14. Did you have any problems replenishing your stocks? (Transportation/shortages/ government restrictions/ financial constraints/damaged infrastructure/increased prices, etc.)		
15. Are there any restrictions on movement of wheat flour for selling or buying? Are these restrictions related to the flooding?		
16. How many customers do you have? (number of transactions daily/or per week)		
17. Do you provide wheat flour on credit to your customers, if yes how much percent of customers?		
18. Do you get credit from your suppliers?		
19. Did the emergency affect your customers' demand for wheat flour? How & why?		
20. Would you say that price competition exists in the market?		
21. How many similar scale traders are and selling similar items in the same local area as you?		22. **Did this change during the floods, and if so, how?**

23. Are there any areas nearby that are not getting regular market supplies?		**24. Are there any additional areas that did not get regular market supplies during the flood?**
25. Is there anything stopping you from growing your wheat flour sales further? If yes why?		
26. What support you think to make better supply wheat flour to people affected by the floods in the future?		
27. Can you provide contact information for people we could interview (your suppliers, or traders you sell to?)		
Any observations/additional information		

Questionnaire for District Food Officer-Govt Official

1. How overall wheat market system work at district level, structure & supply chain of wheat/wheat flour ?
2. What is your target for year to stock wheat in District Sanghar, and Ghotki?
3. From where you normally buy wheat?
4. To whom you sell? is there any quota system?
5. What happened in 2011 flood emergency, enough stock was available?
6. How you controlled prices (in normal/emergency situation?
7. Any suggestions/recommendations on the basis of emergency response

Key Actor in Market – Key Informant Interview wheat flour

District: UC: Name: Contact #

Date:

Critical market item: Wheat Flour	**Business location:**	**Type of market actor: Govt official**

Baseline situation:

1. Describe the functional steps and people or companies involved in getting wheat flour to market (i.e. from producers via traders and intermediaries to consumers). How many actors are in each category?

2. Are there any important services or infrastructure provided by government / local authorities which support or make this market chain viable? (*e.g. credit facilities, power and water, market places*) What are they? How does each of them support the market system? Who are the key players in each type of service/infrastructure, and where are they located?

3. What laws, formal rules, or regulations have a big influence (positive or negative) on the way this supply chain works? Please explain??

4. Are there any informal customs, habits, and practices that shape the relationships (e.g. build trust) between market actors? (*e.g., customs about whom to sell to or buy from*)

5. Which are the months of highest demand in a 'typical' year? And lowest demand?
6. Please estimate the total combined local production that competitors traded last season (at the provincial and district levels, if known, and in the crisis-affected area).
7. Does the price of wheat flour change seasonally? What time of year are the highest and lowest prices usually? What would normally be the price at this time of year?
8. How much stock is generally available during the August/September in a normal year with government? (Breakdown by total stock and in warehouse depots up-province level.)

2010 (Ghotki) /2011 (Sanghar) - Flood Emergency situation

How has the flood (2011 in Sanghar, 2010 in Ghotki) affected the functioning of the market?

9. What impacts / changes occurred in the wheat flour supply routes from producer via trader to consumer?
10. Have any particular market actors or functions in the value chain been especially affected?
11. How did the emergency affect important business services like important government services-how? Public infrastructure how?
12. Did demand for wheat flour increase or decrease? Why?
13. Did prices for wheat flour increase, decrease, or stay the same, compared with the normal trends for August/September? Specify by how much.
14. Are certain groups of consumers in flood 2011-Sanghar, 2010 Ghotki effectively unable to purchase wheat flour because of high prices or lack of access to suppliers?
15. How have traders/govt adapted pattern to overcome challenges caused by the flood 2011/2010?
16. Where would you sourced extra supplies if necessary?
17. Which factors most likely to limited your/govt capacity to increase volumes of business at the time of emergency?
18. Were there certain groups of consumer who had difficulties to supply in 2011 flood emergency – for example because of high risks, weak infrastructure, poor roads?

Any other relevant information?