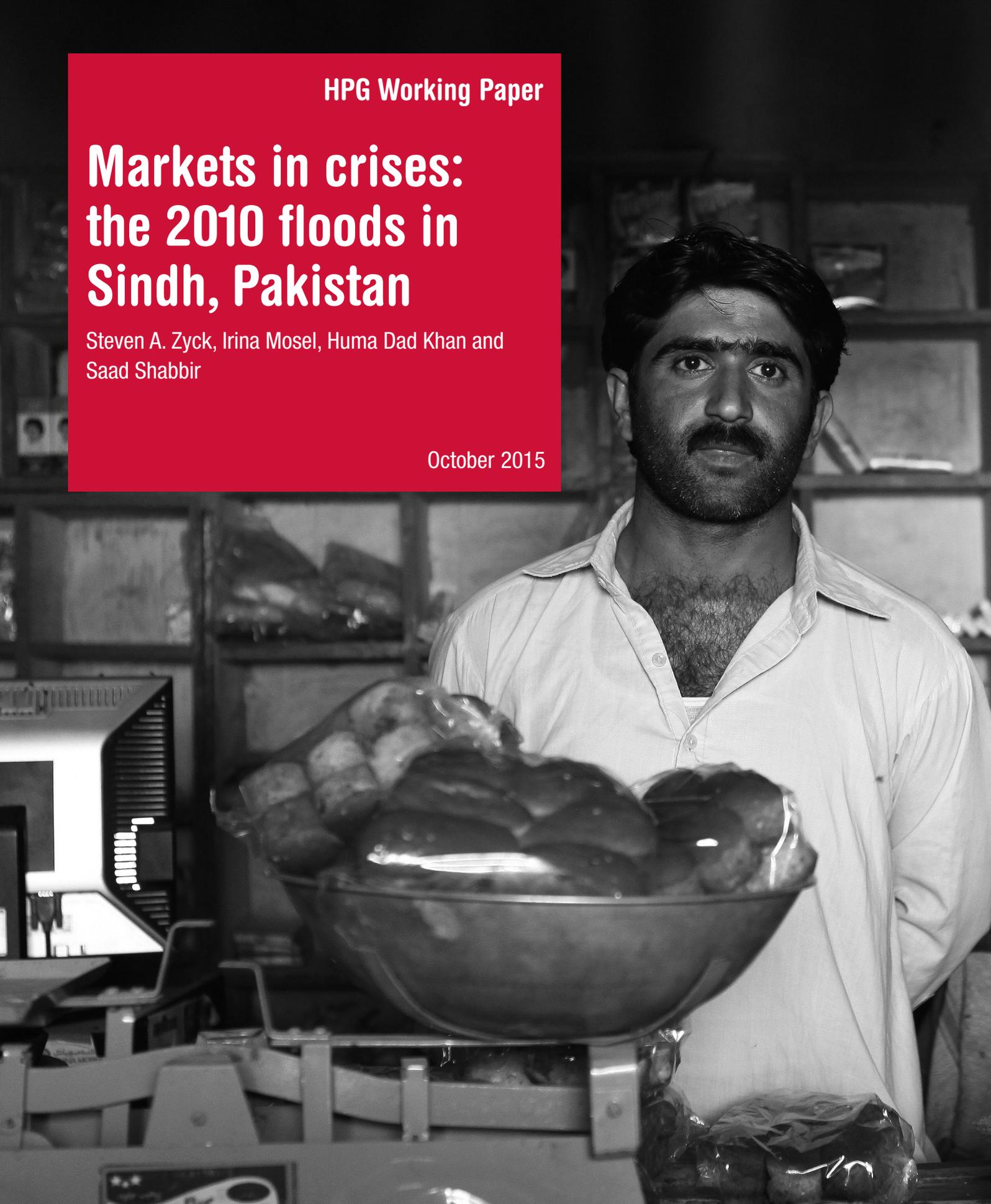


HPG Working Paper

# Markets in crises: the 2010 floods in Sindh, Pakistan

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October 2015



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## Acknowledgements

This project has been conducted in close partnership with the Sustainable Development Policy Institute (SDPI) in Islamabad. This leading Pakistani think tank helped to guide this project's focus and facilitate the research in Islamabad and Sukkur.

The authors are also grateful for the support of the Sukkur Institute of Business Administration (IBA) in Pakistan's Sindh province. Dr Waqar Akram at Sukkur IBA, in particular, helped to advise the research team, facilitate connections with key stakeholders and identify local researchers from among Sukkur IBA's cadre of postgraduate students and alumni. These include (in alphabetical order): Sajid Ali, Asma Hussain, Muhammad Younus Khoso, Imran Leghari, Sajid Hussain Shah and Usama Shahzad. This study would not have been possible without the active engagement of these researchers, including foundational support from Mr Leghari and Mr Shah in Sukkur in setting up the field work in Sindh.

We would also like to acknowledge the support of Pakistan Hands, a local NGO which helped to enable access to flood-affected communities in Sindh during the initial phase of this project. Participants in a February 2010 roundtable discussion in Islamabad at SDPI also provided insightful comments based on their experience not only with the 2010 floods but also with the 2005 Kashmir earthquake and with other crises in Pakistan. The proceedings of this roundtable can be found at <http://www.odi.org/sites/odi.org.uk/files/odi-assets/events-documents/5075.pdf>.

Colleagues at the Humanitarian Policy Group at ODI and the Sustainable Development Policy Institute also provided support in developing the methodology and reviewing drafts of this paper. These include Dr Vaqar Ahmed, Dr. Abid Suleri, Simon Levine, Veronique Barbelet, Hanna Krebs and Safwan Khan.

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# 1 Introduction

Floods in Pakistan in 2010 inundated a wide swath of territory, affecting 18 million people and killing approximately 2,000. The disaster also affected businesses, from some of the largest factories and most fertile agricultural land in the country to small village shops. Many businesses closed, either temporarily or permanently, and people in affected areas could not rely on local markets to meet their family's basic needs or obtain a livelihood.

Many interventions in response to the floods involved markets across Pakistan and in affected areas. International and Pakistani NGOs and others attempted to purchase food – including rice, wheat, fruit and vegetables – locally rather than from foreign suppliers. These same agencies also bought large quantities of construction materials in order to build shelters during the relief, early recovery and reconstruction phases. Large quantities of money were injected into local economies, albeit in very uneven ways.

This study looks at the impact of the flood emergency and subsequent humanitarian response on markets in flood-affected areas of Sindh province. Key issues include:

- How were markets and businesses affected by the crisis?
- How did markets and businesses adapt, and what determined whether they survived or collapsed?
- To what extent did people derive resilience, or become vulnerable, as a result of market activity?
- How did aid efforts support and/or complicate market resilience and recovery? In future crises, how and where can humanitarian assistance best support markets in ways that enhance people's resilience in crises?

The study adopted a qualitative methodology to reflect how changes in the market affected local people, bringing together the social and economic dimensions of markets and engaging with markets and traders, not as conduits for international aid but as parts of affected communities themselves, and as central determinants of household- and community-level resilience. The study focuses mainly on the 2010

## Box 1: Understanding markets

This study employs the term 'markets' to apply to both a physical marketplace with shops and stalls and the broader exchange between buyers and sellers regardless of physical location. The study relies more upon the second understanding of markets – as a process of exchange that involves buyers and sellers, supply and demand, exchange (e.g. cash or credit) and formal or informal norms, regulations and 'rules of the game'. Despite adopting this relatively intangible definition of markets, the study primarily collected data from traders in physical marketplaces as well as from small rural shops and flood-affected communities.

floods – the largest in recent years – though it also considers the impact of successive floods in 2011, 2012 and 2013, which allowed traders, aid agencies and local communities to act on some of the lessons from their earlier experiences.

## 1.1 Methodology

The research involved a comparison of markets as they operated before, during and after the 2010 floods. It was primarily conducted through in-depth, semi-structured interviews and focus group discussions with traders, community and business leaders (e.g. from chambers of commerce and industry associations), government officials, affected households, non-governmental organisations (NGOs), civil society organisations (CSOs) and international organisations. Respondents were asked to provide basic information on which goods were or were not available and which prices changed, and to consider how these affected local power relations and issues such as inequality.

In total 154 interviews and focus group discussions were conducted during the course of the project. An inception phase in January and February 2014 included fieldwork in Sindh province, consultations with aid representatives in Islamabad and an expert roundtable bringing together governmental, non-governmental,

local and international stakeholders involved in preparing for and responding to natural disasters and other crises. The main research phase in August and September 2014 involved fieldwork across three districts in Sindh – Sukkur, Shikarpur and Jacobabad – over the course of several weeks. In both phases the research teams primarily comprised researchers from Sindh itself to counter bias<sup>1</sup> and minimise translation requirements (between English and the Sindhi language, or between Urdu and Sindhi).

Three districts and three main commodities (or categories of commodities) were selected for inclusion in the study. Rice and wheat were chosen because they are staple food items which are grown in northern Sindh, particularly among vulnerable households and landless tenant farmers, and which are necessary during the humanitarian response to crises. Second, potatoes and other vegetables are

**Table 1: Interviews and focus groups**

Type	Number of interviews or focus group discussions
Traders (total)	70
Wheat and/or rice	23
Potato and/or onion	19
Bamboo	25
Other (e.g., trucking firms)	3
Local officials <sup>2</sup>	15
NGO/IO/Civil society	20
Affected households/communities	49 <sup>3</sup>
<b>Total interviews and focus groups</b>	<b>154<sup>4</sup></b>

- 1 In some instances the presence of an international researcher led to the perception, despite assurances to the contrary, that the project was affiliated with international aid agencies and intended to feed into the design of a new humanitarian or development intervention. Such a perception appeared likely to shape responses, from traders and affected households in particular.
- 2 These include government personnel, including district commissioners and local agricultural officials as well as representatives of market oversight and coordination bodies, including chambers of commerce, traders' associations and market committees.
- 3 While a third of interviews and focus group discussions with affected households specifically targeted female respondents, the vast majority of respondents from affected households were men. Particular importance was paid to women's inputs during the analysis of the interview and focus group data.
- 4 Many interviews were attended by more than one individual (e.g. a business partner), and much of the data collection with affected communities comprised focus group discussions with anywhere from five to 20 participants.

staple food items grown in certain parts of Sindh. The third commodity, bamboo, is not widely grown in northern Sindh, but is in demand as a construction material and was bought heavily by aid agencies to construct shelters as part of the response. These three product categories were all affected to varying extents – and in very different ways – by the 2010 floods and humanitarian response.

Northern Sindh province was chosen for a number of reasons. Most importantly, it was severely affected not only by the 2010 floods but also by a range of preceding and subsequent floods of varying intensity. This relatively predictable pattern of flooding meant that businesses and communities were likely to have developed well-worn strategies for preparing for disasters and ensuring continuity during and after them.<sup>5</sup> In addition, northern Sindh has experienced fewer security problems than other parts of Pakistan, though crime and sectarian violence are both growing concerns. Specific areas for inclusion in this study were selected based on consultations with experts.

Sukkur is the commercial hub of northern Sindh and for aid operations in the region; its markets were not physically damaged by the floods, though the city did see an influx of people displaced by the disaster. Shikarpur, a relatively short distance from Sukkur, experienced moderate impacts from the floods: the town centre and market was largely untouched, but surrounding areas were badly affected and under water. Jacobabad district was severely affected, and the district centre and surrounding areas were devastated. Procurement by humanitarian agencies had a major impact on markets in Sukkur, a more modest impact in Shikarpur and a limited impact in Jacobabad. This range of effects – minimal in Sukkur, mixed/moderate in Shikarpur and major in Jacobabad – enabled a comparative analysis of market and aid agency impacts. The research was conducted across these three districts, including in urban, peri-urban and rural areas, including central markets and businesses and shops in medium-sized towns and individual villages.

Following this introduction, Section 2 provides background information on Sindh province and on the 2010 floods. Section 3 looks at key features of markets in northern Sindh, and Section 4 analyses the impact on markets of the flood crisis. Section 5 concludes the paper.

5 In fact, repeated disasters had prevented the accumulation of assets needed to prepare for disasters in a structured way.

# 2 Background and context: the 2010 floods

Pakistan is a disaster-prone country vulnerable to frequent floods, earthquakes, windstorms, droughts and cyclones. It has suffered from a number of major natural calamities affecting millions of people and causing huge economic and human losses: over 6,000 people were killed and almost 9 million affected by natural disasters between 1993 and 2002 (World Disasters Report, 2003). Between 1975 and 2010, natural disasters reduced GDP by 1.48% annually (Sohail et al., 2012).

## 2.1 The 2010 floods

The 2010 floods were the worst in the country's history. One-fifth of Pakistan's total land area was submerged, affecting about 20m people and killing over 2,000. The cost of the damage in Khyber Pakhtunkhwa, Punjab, Sindh, Balochistan and Gilgit-Baltistan was estimated at over \$43 billion. The crisis began in July 2010 during seasonal monsoon rains. As the rains increased rivers swelled and overflowed

their banks, flooding vast swaths of land.<sup>6</sup> The floods occurred in some of Pakistan's most productive agricultural regions, washing away topsoil and causing water-logging that rendered land uncultivable for several years. Grain reserves and 200,000 head of cattle were lost.

The impact was particularly severe in Sindh, where rainfall was ten times higher than normal.<sup>7</sup> Flooding killed 411 people and around 2.8m were in immediate need of assistance. More than two-thirds were concentrated in the three districts included in this study, Sukkur, Shikarpur and Jacobabad. The floods reached their peak in August 2010, shortly after households had harvested their wheat or had taken out loans to finance rice cultivation.

## 2.2 The humanitarian response

The humanitarian response to the floods was kickstarted by the Provincial Disaster Management

Table 2: Key figures on the main districts studied

	Sukkur	Shikarpur	Jacobabad
<b>Background</b>			
Population	1,431,508	1,163,329	980,296
Rural-urban ratio	53/47	51/49	52/48
Literacy rate	46%	43%	31%
<b>Flood impact</b>			
Affected villages	130	1,359	1,123
Affected people	247,913	790,000	892,500
% underwater	Not available	60%	85%
Homes damaged or destroyed	Not available	119,697	135,227

Source: National Institute of Population Studies (NIPS), Pakistan.

6 The IFRC (see Murtaza, 2011) remarks that the affected area was approximately the size of England.

7 Sindh is Pakistan's third-largest province, with a population of approximately 42.4 million as of 2010. It contributes about a

third of national GDP. Lower Sindh is the commercial hub of Pakistan with the main seaport of Karachi, whilst middle and northern Sindh are more agriculture-intensive, despite a dry climate.

## Box 2: Divisions within Sindh

Sindh is home to various ethnicities, including Balochs, Hindus, Pakhtuns, Punjabis, Seraiki, Sindhi and Urdu-speaking people (also known as *Mohajirs* (Migrants)). There is a long history of conflict between the *Mohajirs* and the Sindhi people. The two ruling parties in Sindh are the Pakistan People's Party (PPP), perceived as pro-Sindhi, and the *Mutahida Qaumi Movement* (United National Movement – MQM), perceived as pro-*Mohajir*. Pathans play a key role in the transport sector, whereas Punjabis own many key businesses (PILDAT, 2011). Sindhis are largely landowners or peasants. Landlords are the most powerful elites in Sindh, enjoying social, economic and political influence, and large parts of Sindh have a history of feudalism. An estimated 1.7m people work as bonded labour in the agricultural sector, the majority landless farmers (*haris*) (DAWN, 2012). Influential politicians, landlords and other local figures are also accused of diverting flood water and breaching dykes to save their own farms (Ahmed, 2011; BBC News, 2010; Scruton and Walsh, 2010).

Authority (PDMA). The provincial administration and district offices called a meeting with all government departments and local and international organisations to coordinate around a pre-prepared contingency plan and launch a process of information-sharing and coordination. A wide range of governmental and international aid agencies became involved in northern Sindh in sectors including food, shelter, water and sanitation and health.

First responders – besides communities and local officials themselves – tended to be local organisations with a standing presence in affected areas. These included organisations such as HANDS, a local NGO, which evacuated more than 100,000 people from flood-affected parts of northern Sindh and established 123 relief camps for IDPs in Sukkur and Shikarpur (Pakistan HANDS, 2010). The Sindh Rural Support Organization (SRSO) raised around \$53m and provided extensive humanitarian assistance, including distributing 24,000 tonnes of food for the World Food Programme (WFP). Other international actors also relied on SRSO, including the UN Food and Agriculture Organisation (FAO) and the

International Organisation for Migration (IOM) (SRSO, 2011).

A large number of international NGOs also set up operations in northern Sindh, many for the first time. Who, what where (3W) maps from the time – and interviews with NGO staff in Sindh – indicate that organisations including Save the Children, World Vision, CARE, Oxfam and Catholic Relief Services were closely involved alongside Pakistani NGOs and civil society groups. While many of these NGOs did not have pre-existing operations in northern Sindh before the floods, several described having learnt from the 2005 earthquake response in Kashmir and, as a result, were more committed to local procurement and engagement with markets. While many aid agencies relied on goods from abroad, NGOs reportedly stepped up local procurement of food and non-food items, such as blankets, hygiene kits and tents, and used local labour to build shelters (Polastro et al., 2011).

Cash transfers by the Pakistani government played a prominent role in the response. The provincial government reportedly gave PKR 68.8m (\$675,000) to SRSO to provide cooked food to 1.4m people in Sukkur, Shikarpur, Kashmore, Jacobabad and Khairpur. Nearly half a million cash transfer cards were distributed by January 2011, allowing recipients to access cash from local ATMs.<sup>8</sup> Other government cash transfer programmes included the Benazir Income Support Programme (BISP), a social safety net scheme, which gave poor households small cash grants of PKR 4,000 (\$40) (Pakistan Ki Awaz, 2010).

Power relations were crucial in aid agencies' ability to access people in need.<sup>9</sup> Given the considerable political power landlords in Sindh hold it is often difficult for aid agencies to access tenants directly for aid interventions without passing through them. Interviews suggest that, in the initial relief phase, aid agencies often managed to distribute inputs such as fertiliser or seeds according to need and without the interference of landlords. Thereafter, however, it became increasingly difficult for aid agencies to operate as landlords interfered more frequently. Aid

8 The late loading of WATAN cards was a persistent problem, as was the lack of ATMs in affected areas. Queues of hundreds of people waiting at a single ATM were not uncommon for days after the WATAN cards had been loaded with credit.

9 For a paper discussing similar findings with regard to power relations and aid agency interventions in SWAT, see Shah and Shabaz (2015).

agencies, including local NGOs, found it hard to resist pressure from landlords and influential local politicians, and a number of NGOs distributed fertiliser and food directly to landlords. While landlords insisted that they would pass these inputs onto farmers, it was alleged that this rarely happened in a fair and transparent manner. This meant that, in some cases, landlords may have received the lion's share of assistance while tenants fell further and further into arrears as landlords did not write off their

debts and tenants were unable to harvest due to the floods. Aid agencies also feared that providing support for land rehabilitation might lead to landlords asking tenants to leave. Some agencies made agreements with landlords which stated that they could not change the tenant for at least two years. However, these agreements were worthless in practice, and in any case were not legally binding.<sup>10</sup>

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<sup>10</sup> Similar findings were reported in Haiti – see Levine et al. (2012).



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# 3 Markets in northern Sindh

This section provides a brief overview of how markets operated – for the commodities included in this study – under normal (non-crisis/disaster) conditions, as a starting-point for Section 4’s in-depth discussion of how markets were affected by the 2010 floods and the subsequent humanitarian response. Sindh is the third-largest province in Pakistan and contributes 30% of national tax revenues (EMMA, 2010b). However, much of its economic activity and wealth is centred in Karachi; the predominantly rural areas of northern Sindh are dependent on agriculture and the eight million acres of cropland irrigated by the Indus River. The province’s major crops include rice, wheat, cotton, sugarcane, bananas, mangos and animal fodder. Most producers are very poor tenant farmers, with land and economic activity controlled by a narrow elite. The September 2010 EMMA report for Pakistan notes that only 16% of the population of Sindh enjoyed acceptable levels of food consumption before the 2010 floods.

## 3.1 Trade flows

Sukkur’s location at the junction of Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa provinces makes it a trade hub: produce travelling from the upper two provinces to the lower ones have to go through Sukkur, and vice versa. Kharif (summer) crops are harvested in Sindh, which is hotter than the rest of Pakistan. The weather gradually gets milder further north, so the lowest belt of Pakistan – the lower halves of Sindh and Balochistan – harvests the crop first. The next belt – the upper half of Sindh and Balochistan – follows, and so on in Punjab and Khyber Pakhtunkhwa. Each belt supplies their yield to the rest of Pakistan in the same order. This flow of trade first reaches Sukkur from other parts of Sindh, and from there goes to Punjab and Khyber Pakhtunkhwa, and vice versa. All surplus production is transported from Sukkur to Karachi for export.

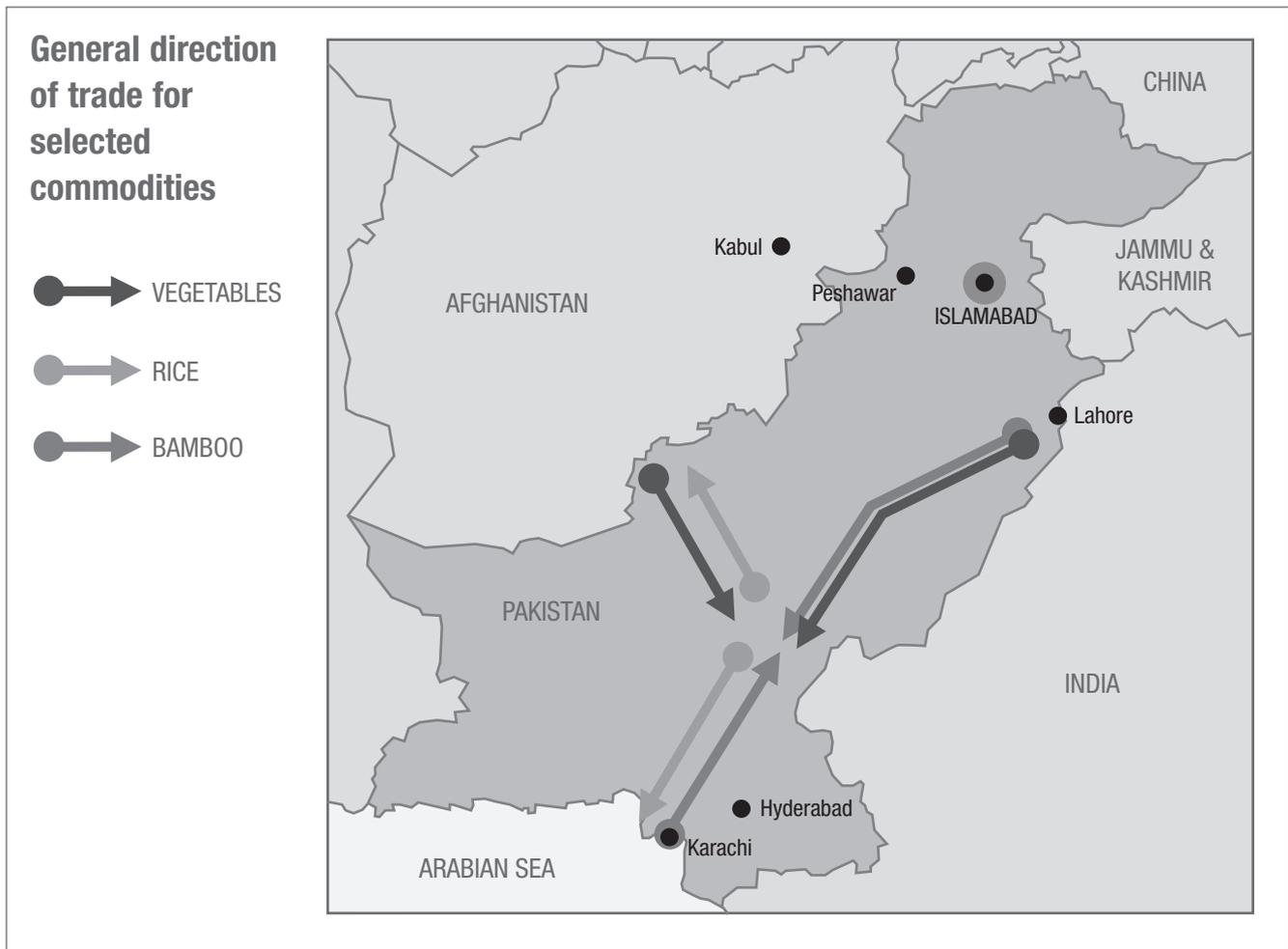
Large wholesale dealers in Sukkur have connections in all parts of Pakistan, and buy from contacts in a trading relationship that is generally as old as their businesses. These traders mostly deal on credit, paying the seller back in a month’s time; business communication is done mostly over the phone or via personal visits,

either by the traders themselves or their partners. Once produce reaches Sukkur, large wholesalers sell it on to other large wholesale traders in Punjab and Khyber Pakhtunkhwa, and to medium-sized wholesale traders in surrounding areas of Shikarpur and Jacobabad. Some produce is sold to commission agents in Sukkur’s wholesale market, and to retailers in Sukkur. Commission agents buy 100–500kg of produce from wholesalers daily at auction. The majority of retailers and individual buyers purchase from commission agents. Medium- and small-scale traders generally buy from traders offering the best price. However, some small- and medium-sized traders may also buy from a specific trader for several consecutive years, before moving on to a different seller.

According to large wholesale traders, Sukkur market is considered the largest in Pakistan in terms of trade flow. Large wholesale traders have huge stores where they can keep produce for at least a month. Wholesale traders in Shikarpur and Jacobabad have relatively little storage space compared to counterparts in Sukkur, mainly because the flow of goods in and out of these markets is lower.

## 3.2 Selected commodities

Vegetables – with the exception of onions and potatoes – are seen as luxuries, particularly among more vulnerable and rural households. Wheat, for instance, comprises half of the average diet in Sindh (EMMA, 2010). While fruit and vegetables are grown in Sindh, much of the province’s vegetable supply tends to come from either Punjab or, in late summer and early autumn, areas around Quetta in Balochistan. Items such as potatoes and onions, two commonly consumed vegetables in Sindh, are first purchased by wholesalers, who then transport them to market centres in places like Sukkur. From there they are generally sold to retailers of various sizes, from micro-enterprises to larger-scale supermarkets. A micro-retailer will sell a very small amount of goods on a small carpet in the market or from a cart; medium-sized retailers commonly sell in a larger shop or stall in the vegetable market. Large retailers and wholesalers deal in very



large quantities and often have 5- or 10-metre-high piles of produce in the middle of major urban markets, with more in nearby warehouses. Prices charged for various quantities are fixed across all traders in the main markets, regardless of size, by Market Committees controlled by the largest and most established traders. Fixed prices vary from day to day, and help to prevent competition from driving down prices. Prices in secondary and tertiary markets are not fixed, and reflect additional transport costs.

Households in rural Sindh are heavily involved in rice and wheat cultivation, and these two items are the core of the Sindhi diet for the vast majority of the population. Wheat is cultivated by poorer people, including tenant farmers. Tenancy agreements between tenants/sharecroppers and landlords range from renting the land on an annual basis (simple lease) to sharing produce to varying degrees depending on the wealth status of the tenant. Sharing produce 50:50 is most common, though splits of 75:25 or on a one-eight basis are also practiced (Hussein et al., 2004). Tenant farmers generally receive their wheat seeds and other inputs, particularly fertiliser, from landlords,

whom they pay back at an inflated rate. Rice, which costs more to cultivate, tends to be grown by small landholders and a smaller number of tenant farmers.

Bamboo is most commonly used as a roofing material but is also used in constructing latrines, ladders, carts and temporary shelters during the summer in order to help people avoid the summer heat. It comes in a variety of sizes and thicknesses, ranging from several-inch-thick beams used in construction to bundles of thin bamboo, which is used primarily as a form of thatch. The thin material is grown in Sindh, but proper bamboo is cultivated almost exclusively in Punjab. Importers also bring in additional bamboo from China and Bangladesh to supplement local production when needed. Bamboo dealers, who are generally large, tend to have well-established relationships with suppliers in Punjab. A small number of medium-sized retailers sell bamboo purchased from wholesalers. Households and small businesspeople deal with medium-sized retailers while – under normal circumstances – wholesalers deal almost exclusively with construction companies and other large customers, such as district governments.

# 4 Markets and the flood crisis

## 4.1 Overview

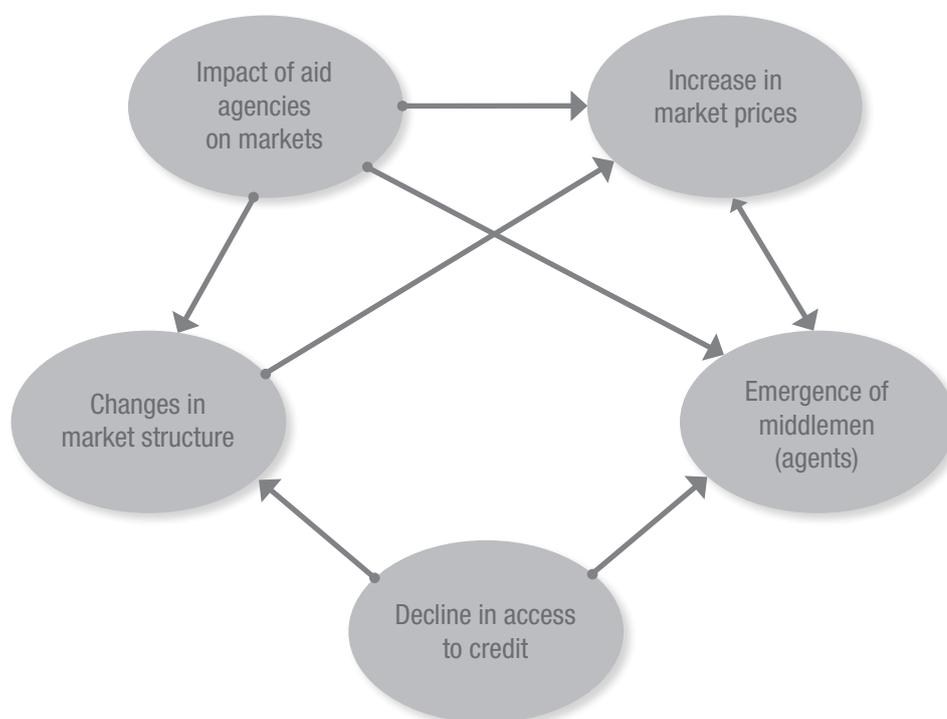
The 2010 floods destroyed tens of thousands of homes in northern Sindh and devastated household food stocks, mostly rice and cereals, and productive assets. Demand for food on markets increased, as even largely self-sufficient rural households were forced to buy food. This required cash, which many rural households only periodically use given the barter-based nature of much village-level commerce. Likewise, demand for basic construction materials such as bamboo increased. This growth in demand, combined with reduced stocks as a result of flood damage and interrupted supply lines, led to rising prices during the floods and in the initial relief phase, which lasted several weeks.

**Table 3: Selected post-flood livelihood-related statistics for Shikarpur and Jacobabad<sup>11</sup>**

Indicator	Shikarpur	Jacobabad
Poor or very poor (% of population)	45.4%	56.5%
Change in spring (rabi) harvest in 2011 (post-floods)	-83.3%	-75%
Sheep or goats per household (before floods/ after floods)	7.37/3.06	5.81/3.12
Average household debt	PKR 40,000 (\$393)	PKR 35,000 (\$344)

Source: Food Security Cluster, *Detailed Livelihood Assessment in 28 Flood-affected Districts of Pakistan, 2011*.

### The inter-relationship between the flood crisis, markets and the humanitarian response



<sup>11</sup> The assessment from which these statistics were extracted did not include Sukkur.

As the most intense period of flooding passed and major roads became passable market activity began to resume. However, producers gave less credit on stricter terms (e.g. faster repayment requirements) to wholesalers, who subsequently tightened credit for retailers. Middlemen known as ‘agents’ provided short-term loans at exceptionally high rates to selected traders in Sukkur to enable them to supply aid agencies procuring locally. These high fees were passed on to the agencies, increasing the costs of relief goods, particularly shelter materials. Other factors driving prices up included supply shortages; vegetables were particularly scarce and hence costly for several months after the floods. Rising demand among affected communities and aid agencies also inflated prices for many goods, though some commodities saw their prices decline: basic foodstuffs such as wheat, rice, oil and milk were distributed by aid agencies for up to two years after the floods, depressing market prices.

The structure of the market also changed. Large businesses with more capital were able to obtain new supplies and transport, and benefited from international contracts for food and construction materials. Meanwhile, smaller businesses, particularly those selling basic foodstuffs, found it more difficult to restock – particularly outside urban centres like Sukkur – and faced lower demand because requirements for these items were partly being met by aid agencies. These trends combined to create a number of highly profitable very large firms, while pushing smaller firms further down the hierarchy: some larger businesses became medium-sized, some medium-sized firms became small businesses and a number of small businesses became micro-enterprises or closed altogether, often because their proprietors found more profitable wage labour as recovery got under way in Sindh.<sup>12</sup>

## 4.2 Credit

Markets across northern Sindh rely heavily on credit between suppliers and customers. Credit arrangements are particularly loose for the largest buyers. For instance, a bamboo wholesaler would not pay the producer in Punjab for his last order (several months

earlier) until he placed the next. That wholesaler’s customers, generally construction companies or bamboo retailers, would pay for their purchases one to three months after receiving their bamboo shipment. The final consumer might then have several weeks or months to pay the retailer from whom they purchased their bamboo. Interest does not generally seem to have been charged and any associated lending fees are incorporated into the cost of the materials.

Businesses often trade with the same suppliers and buyers for decades if not generations, and credit is based on trust. Access to credit is cyclical, with many farmers involved in rice cultivation purchasing goods on credit while the rice is growing, in anticipation of repaying their loans around September when the rice crop is harvested and sold. This meant that, when the 2010 floods hit in August, they arrived after credit had been extended to rural households (and to the businesses supplying them) and shortly before repayment was expected.

The floods affected credit markets in several ways. First, repayment was still demanded, and this study found no significant instances where suppliers had forgiven all or part of the debts owed by their customers. A wholesaler or retailer would need to demonstrate to their suppliers that they could repay a portion of the funds they owed before the floods, and afford to take on additional stock to replace what they had lost. This meant that credit remained available – among the largest businesses – but tightened considerably. A wholesaler that had previously had three months to repay its supplier might be asked to make payment within a month, or might be asked to meet half of the cost up-front. In order to repay the supplier, this wholesaler applied even stricter terms to his or her customers, who would be asked to make a down-payment of 50% and to pay the remainder within one or two weeks. In most cases the end consumer was no longer able to access goods on credit, and would be asked to provide cash up-front.

This tightening of credit arrangements was exacerbated by the fact that, due to interrupted supply lines and flood-related displacement, businesses and affected households often found themselves dealing with new traders and shops with which they had no track record. A wheat dealer wiped out by the floods would not have been able to rely on his traditional suppliers in Sindh, but would instead need to contact traders in places like Karachi or Lahore. Likewise,

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<sup>12</sup> Many micro-enterprises recovered quickly after the floods given that they often lived hand-to-mouth, dealt with very small quantities and did not have debts or valuable inventory which would have been affected by the 2010 floods.

after being displaced to another area households accustomed to dealing with a certain set of traders in the local market to buy food and other items had to purchase items from an entirely new set of shops. Without accumulated trust and established relationships, traders and customers at all levels grew increasingly wary about extending credit for more than a year. Displaced people noted that they were unable to obtain credit from local shopkeepers – with whom they dealt on a regular basis – for two to three years after the floods.

Businesses and other customers responded to tighter credit arrangements in different ways. Some small businesses were unable to restock and went out of business entirely. In other cases businesses and households simply bought less than they would have preferred. This meant that aid agencies were at times less able to rely on local procurement, and several turned to suppliers outside of the affected areas or outside of Pakistan altogether.

### 4.3 Middlemen

Middlemen have a long history in agricultural markets in Pakistan, but moved into new areas following the 2010 floods. Under normal circumstances, middlemen – referred to as ‘agents’ or ‘commission agents’ – supply small, independent farmers with seeds, fertiliser and other inputs on credit, which they would otherwise be unable to buy at the start of the agricultural cycle. After the harvest, the same agent is then responsible for arranging the sale of the crops to a buyer (generally a wholesaler, a mill or an exporter). The agent then reimburses himself for the inputs at an often-exorbitant rate (e.g. 147% of the cost of wheat seeds and 176% the cost of fertiliser) (see Bashir, Mehmood and Hassan, 2010). Ultimately agents receive at least half of the value of a farmer’s harvest – and often more. While this arrangement works out very poorly for the farmer, it is necessary because of the agents’ monopoly on access to credit.

Agents and other middlemen appeared in a major way in the trade in bamboo and broader construction materials shortly after the peak of the flooding. As previously noted, construction materials saw a massive increase in demand following the floods as aid agencies, traders and individuals sought bamboo, timber, cement, steel rebar and other items to support reconstruction efforts. Dealers found themselves

overwhelmed, not only by the level of demand but also by the procurement paperwork required by aid agencies, particularly international NGOs. Bamboo dealers interviewed in the course of this study described a tension between their desire to do business with aid agencies – which were buying very large quantities – and the basic reality that they could only order large amounts of bamboo if they received payment up-front. Since NGOs generally paid only around 20–30 days after receiving shipments of bamboo and other construction materials, dealers needed some source of forward financing. Agents stepped in to meet both of these needs, handling the paperwork required by aid agencies and providing capital to allow dealers to pay in advance for large shipments from, for instance, bamboo growers in Punjab.

While some agents reportedly came from northern Sindh, the majority were apparently from major cities such as Rawalpindi and Karachi, drawn into the business by the potential for profits. Bamboo dealers noted that they often purchased bamboo – with agents’ assistance – from producers for roughly 7–8 rupees a foot, and sold it to NGOs for 15–16 rupees a foot. The bamboo dealer would receive a small amount of the profit (1–3 rupees/foot), while the remainder went to the agent. Put another way, agents received at least 50% return – and often more – in exchange for managing paperwork and providing credit for approximately two months.

### 4.4 Market prices

Detailed price data for rice, wheat and other basic commodities for 2010 or in the preceding or following year was not accessible to the research team; WFP only began consistent price monitoring in Pakistan in November 2011, and data published by the Pakistani Bureau of Statistics started in 2012.<sup>13</sup> That said, interviews with traders, local officials and affected households reveal dramatic fluctuations. Rice prices were the least affected, increasing by 50% during the floods and initial humanitarian response before settling at 25% above normal levels, so that a 50kg bag of rice would generally have risen from 2,400 to 3,600 rupees before settling around 3,000. Wheat

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<sup>13</sup> Market Committees in Pakistan are also responsible for monitoring market prices but, during the floods, either did not document prices systematically or were not willing to share price data.

prices rose from 20–25 rupees/kg before the floods to as much as 40–60 rupees at the height of the crisis. Prices eventually fell to around 30 rupees but never declined to their pre-flood levels. The greatest increase in prices involved vegetables, which were difficult and costly to import into affected areas. Given the scarcity of items such as potatoes and onions, dealers were able to charge high prices even as their stock declined in quality: one kilogramme of potatoes rose from 20 rupees to 50–60 rupees in city centre markets and 100 rupees in more isolated areas. Likewise, onions rose in price from 5 rupees/kg to 50 at their peak.

These price fluctuations probably reflect predictable patterns of supply and demand. Staple foods such as rice and wheat rose in price, but government action on prices and downward price pressure from aid agencies, which were giving away these items for free, meant that they rose only so far and for a relatively short period. Fruit and vegetables, which were expensive to import as a result of road damage and a scarcity of trucks, grew far scarcer and, thus, rose more dramatically in price.

Bamboo prices were closely correlated with local and aid agency demand. When people began returning to their homes two to three months after the floods, demand for bamboo started to increase as rebuilding began. After six months demand increased further as IDPs returned home, and a year after the floods, with shelter reconstruction in full swing, prices hit their peak of 15–16 rupees per foot, roughly twice the normal retail price of 7–8 rupees. Aid agencies, which used bamboo extensively for shelters and water and sanitation facilities, stripped markets in Sindh and bamboo-producing parts of Punjab. The resulting scarcity, combined with aid agencies' willingness to pay well above market rates, drove up prices.

For all the commodities included in this study (and many others), prices were driven up by high transport costs. During the floods fuel prices spiked by 50%, and trucks were commonly forced to take long routes in order to avoid flood-damaged roads and bridges. For instance, trucks that typically used to take a 400km route from Quetta to Sukkur during the late summer and autumn, bringing in fruit and vegetables from Balochistan, were obliged to take a route from Quetta to Sukkur via Karachi that was nearly 1,200km long. Transport firms indicated that prices for inter-city trucking – such as from Karachi to Sukkur – increased by around 130%. Transport prices

rose far more dramatically for trucking within affected areas, where transport costs rose by 500%–900% as a result of greatly increased demand from affected communities, businesses and aid agencies.<sup>14</sup>

## 4.5 Changes in market structure

All the issues noted above had a collective impact on the structure of markets in northern Sindh. Larger shops and wholesalers of construction materials expanded significantly during and after the floods, while small-scale retailers and distributors were forced out of business as aid agencies bought materials directly from larger shops and producers. One wholesaler in Sukkur explained how during the floods his daily sales had increased from 500–1,000 rupees to 100,000–150,000 rupees. Meanwhile, tighter credit arrangements meant that shops at every level demanded more up-front cash from the next buyer in the market chain, and were less willing to accept supplying on credit. For the smallest shops this meant they had to pass this onto their customers, the final consumers, who did not have sufficient purchasing power. Many shops had to scale down and some were forced to close.

Large traders also had an advantage in terms of storage as they were the only businesses that could afford expensive warehouses, enabling them to continue to sell during the floods. Smaller businesses often could not afford storage and quickly ran out of stock. Many of the smaller shops, particularly in villages, were unable to restock and many were forced to close or merge with other small traders. Distributors, who would normally bring goods to small retailers, also went out of business. There is some indication that several traders changed the focus of their business altogether. In Shikarpur, for example, many vegetable traders shifted to poultry.

## 4.6 The impact of aid agencies on markets

Aid agencies had a key impact on both supply and prices in the markets of Sindh. Given supply difficulties and stringent procurement guidelines, aid

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<sup>14</sup> Many aid agencies demanded transport from their suppliers or producers to the final distribution points often in or as close as possible to recipient communities.

agencies favoured larger traders and wholesalers, drastically increasing these traders' profits and supporting the expansion of their businesses. Producers and manufacturers also profited because they saved money on marketing and logistics, as much of these activities were now undertaken by NGOs themselves. In effect, aid agencies inadvertently subsidised some of their local suppliers by paying separately for logistical services which were already incorporated in the unit price. Small and medium-sized retailers and distributors lost out as many – though not all – aid agencies bought from big suppliers. Demand from their usual customers also declined as people obtained their food and other items such as construction materials directly from aid agencies. Aid was often given for a prolonged period – in the case of food assistance up to 20 months – forcing many smaller shops out of business altogether.

Some of the most striking effects of the humanitarian response on markets was the bamboo sector. In the first weeks and months after the floods, demand for bamboo increased only slightly as displaced people and local NGOs purchased low-cost bamboo. EMMA surveys in September and December 2010 noted no significant reports of increased demand or higher prices among retailers and wholesalers in Sindh, but warned of shortages in local markets should the shelter response increase significantly (EMMA, 2010a; 2010b). Supplies came under serious pressure once large numbers of aid agencies started buying bamboo in huge quantities during the early recovery and reconstruction phase, which began three to six months after the peak of the floods. Many aid agencies did not appreciate the fact that locally purchased bamboo was naturally limited and that supply could not be expanded, even through imports, within the short timeframe of the humanitarian response. Because EMMA surveys were only conducted at the beginning of the crisis and were not repeated periodically, they were unable to highlight changes in the market and shortages of supply.

Aid agencies bought bamboo from retailers and wholesalers in Sindh, but ordered the bulk of their supplies from private producers in Punjab, where it is grown both as construction material and for the paper pulp industry (EMMA, 2010b). As bamboo is cultivated all year round there is normally little seasonal variation in price or supply (*ibid.*). However, given that agencies had limited knowledge of acceptable market prices and were under pressure

to spend resources quickly, they were willing to pay much more than the usual market price, driving prices up even further and denuding bamboo markets in Sindh and at source in Punjab. Prices of bamboo also increased significantly once middlemen got involved in the trade. Some wholesalers in Sindh started to contact different producers in Punjab as their old suppliers had run out of stock or were unable to meet the increased demand. While this enabled them to establish new business relationships and supply lines, they were often charged a higher price than their typical suppliers.

Lack of coordination between aid agencies, and between agencies and the government, meant that there was a lack of awareness of the collective impact of interventions on local markets and businesses, particularly in the bamboo sector. That said, several interventions had a positive impact on local business and markets. Some international NGOs began subsidising deliveries of construction material, food and other items from district-level markets down to individual communities. Local NGO SRSO provided interest-free loans to small businesses, enabling some to survive and recover after the floods. Oxfam and Save the Children also adopted market-based interventions which helped to maintain and revive markets for fruit, vegetables and other key items in urban areas, and UNDP provided grants to re-establish small businesses and village shops. Initiatives such as these were however limited, and many Pakistani businesspeople, government representatives and NGO staff indicated that, in most cases, aid agencies tended to work around rather than with markets.

By early 2011 aid agencies had come to realise the impact they were having on markets, and began to take corrective action and operate in less market-distorting ways. Again, some of the best examples relate to the shelter sector and construction materials such as bamboo and timber. The UK Department for International Development (DFID), for instance, worked with HANDS and the International Organization for Migration (IOM) to develop new and more affordable approaches to housing construction. After experimenting with brick and bamboo-based designs, they eventually settled on a method that used local soil stabilised with lime. This proved cost-effective and helped to produce houses that were better suited to northern Sindh's climate, which can top 40 degrees Celsius in the summer. These soil-lime bricks cost 80% less than the typical variety and are flood-resistant.

Aid agencies also introduced food vouchers and cash transfer programmes to reduce their impact on existing food providers. One international NGO supported small and medium-sized businesses by partnering with them on food vouchers – even though this required far more time and energy than working with a smaller number of large businesses. Another international NGO is working on supporting relationships and trust between suppliers, wholesalers and retailers, and facilitating credit arrangements that can be relied on during emergencies. Several NGOs introduced vouchers to pay suppliers more quickly, and encouraged local suppliers to get bank accounts where they can keep savings. However, many such experiences fall more into the recovery period – beyond the relief and very early recovery programming phases addressed in this study.

## 4.7 Business resilience

Local traders learned a great deal from the 2010 floods and the subsequent humanitarian response. For instance, the bamboo sector grew rapidly as employees of large companies – having seen the profits their managers made after the floods – set up their own bamboo shops. Larger dealers, hoping to maximise future profits, began to order more bamboo in case flooding recurred and prices of construction material

spiked again. Dealers also described having raised the shelving in their warehouses to ensure that their stock was not damaged by floods.

However, other traders – beyond those dealing in bamboo – did not adjust their business practices based on their experience of the 2010 floods. Many described having been wiped out by the floods and facing continuing difficulties as a result of further floods in 2011, 2012 and 2013. Hence, even where they did hope to upgrade their facilities to make them more resistant to future flooding, business owners did not have the capital to invest in these mitigation measures. Affected households told a similar story. After spending available resources and taking out loans to feed their families and rebuild their homes after the 2010 (and subsequent) floods, they had little money to invest in things like more durable and flood-resistant storage facilities for their food stocks, agricultural inputs and other key assets. Landlords frequently refused to waive their tenants' debts, and farmers struggled to pay back their loans as the floods had destroyed their harvests. With additional flooding in 2011 and 2012, many tenants fell further and further into debt. While this study anticipated documenting a range of home-grown risk reduction practices borne out of the recurrent floods in northern Sindh, the research team instead found that the floods had in fact prevented these from emerging.

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# 5 Conclusion

The 2010 flood disaster affected markets in several ways. Supplies dried up for a short period and prices spiked. Aid agencies drove up prices in some areas (e.g. construction materials), while depressing them in others (e.g. staple foods). Social relations and trust among businesses were severed, and building new relationships among traders and between traders and affected households took time. Some of these consequences could have been mitigated with better pre-crisis preparedness and post-crisis understanding of markets and businesses – some of which is now happening in Pakistan. Measures could include supporting businesses to ensure continuity during disasters by making simple improvements in facilities or by helping to strengthen relationships and trust between producers, suppliers and traders. It could also mean establishing or supporting financial transaction systems that would make credit more easily available during a crisis, including for small traders. Aid agencies could look at payment systems that require less paperwork, especially for smaller traders, and that allow payments to reach traders more quickly, minimising the need for middlemen. Better information to help link supply and demand more effectively during disasters and to ensure that scarcity during the relief and recovery phases does not result in shortages or price spikes could also be beneficial. Such a system was established by the Pakistani government's Earthquake Reconstruction and Rehabilitation Authority (ERRA) during the 2005 earthquake and could be replicated in future disasters.

Smaller businesses were often affected more heavily than larger ones, both by the crisis and by the ensuing humanitarian operation. Agencies' procurement policies tended to favour larger traders and enabled the emergence of middlemen, who skimmed large amounts off traders' profits. This led to permanent changes in the market structure, as in the bamboo sector. What does this mean for aid agencies and the way they operate? Aid agencies need to make informed choices about how they buy locally, and the effects this has: if the imperative is efficiency, then buying from traders with the largest market share might well be the most suitable way to achieve that goal. However, if the imperative is to reduce changes in the market structure

and help smaller businesses to continue operating, then procurement policies and the way agencies buy need to change. There are no easy answers, but there has to be a recognition that whatever aid agencies do will inevitably have an impact on markets, and internal guidelines, training and expertise may need to be adjusted.

Aid agencies and national and local government agencies have continued to learn and improve their preparation for disasters, including for market-based programming. Market analysis tools such as Emergency Market Mapping and Analysis (EMMA) were still very new in 2010, and many agencies were using them for the very first time during the 2010 floods. During subsequent floods and humanitarian emergencies in Pakistan in 2011, 2012 and 2013, humanitarian agencies made great efforts to advance preparedness, strengthen and expand the application of existing tools and develop complementary frameworks and coordination mechanisms, such as the Pakistan Emergency Food Security Alliance. Many of these efforts have resulted in improved programming and innovative approaches, including efforts to support and work through markets.

With regard to market analysis, this study flagged up a number of issues that the humanitarian community continues to grapple with. These have less to do with the quantity or quality of the market analysis tools available to the humanitarian community, and more with the way these tools are used and implemented, the areas that these analyses cover and the skills needed to carry out good market analysis. In the 2010 floods, market analysis tended to be conducted relatively early in the humanitarian response, but was not repeated periodically throughout the crisis. This is an issue not only in Pakistan, but also in other countries where market analysis has been carried out. Given that market dynamics change dramatically and often quickly, repeated analysis is needed. In the case of Pakistan, for instance, one EMMA highlighted the potential for price spikes in construction materials as a result of aid agency demand, but there was no report to raise the alarm when this started to become a reality. In addition to regularly updated market analyses, there

is a need for a different kind of analytical product – one that not only captures general trends and patterns, but also raises the alarm when prices, supply or demand change in troubling ways. While the tools for this are available in principle, in practice this kind of analysis is still rarely implemented.

Finally, future analyses need to be better at capturing the political economy of markets in crises and transitions. Who is benefiting and who is not? How are the crisis and humanitarian response likely to affect patterns of inequality? How do underlying social and political dynamics affect markets, and how might humanitarian interventions take these into account? Such questions are often not addressed by existing

market analysis. While current approaches can always be tweaked and refined, the difficulties involved in conducting such analysis seem to lie less in a lack of analytical tools and more with the kind of skills available in humanitarian organisations and the short timeframes under which most assessments currently have to operate. Even in the context of this study, which benefited from more time and more in-depth research tools, the team found it difficult to get to the bottom of the many social, political and power issues that permeate markets in Sindh. However, these are precisely the questions humanitarian actors need to understand if they are to make informed choices about their interventions in markets, with a view to better assisting people affected by crisis.

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