

Economic Impacts of Floods on Small Scale Farmers of Pakistan:

A case study from the district Nowshera, Khyber Pukhtunkhwa Province

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Abbreviations :

ADB	Asian Development bank
UNHCR	United Nation High commission for Refugee
WFP	World Food Program
WB	World Bank
USAID	United States Agency for International development
NGOs	Nongovernmental Organizations
KP	Khyber Pukhtunkhwa
IKF	Imran Khan Foundation
FAO	Food and agriculture organization
DRR	Disaster Risk Reduction
NIC	National Identity Card

Abstract

The purpose of this study is to explore the economic impact of floods on small scale farmers in District Nowshera KP Province (Khyber Pukhtunkhwa) Pakistan. The study shows the devastating effects of flood in 2010 on livelihood of the people and making their life difficult. The research is based on telephonic interviews, literature reviews.

The cases shows that majority of the farmers are facing livelihood issues for their survival. The farmers who are living already in critical condition flood took away the entire livelihood from them and made them more vulnerable. The study also put some light on gender issues during the flood and the role of military, NGOs and government during the flood.

Key Words:

Livelihood, Small scale farmers, Military

Personal experience from the flood:

During the time of the flood 2010 I was in Pakistan and I personally observed the destruction and the damages that were caused by it. The flood hit many districts of the Province Khyber Pakhtoonkhawa like Charsadda, Mardan and Nowshera. Most of these districts were near the river Kabul and River Swat. My town was 6 kilometers away from the area affected by the flood and I saw how water level rose up and destroyed all the major crops like sugarcane, wheat and rice taking away the livelihood of the people in district Nowshera at a major loss to the livestock, mostly the cows and sheep's were taken away as there was no chance to rescue them due to the fact that there was no earlier warning given by the authorities. Nearly all the people were asleep when the flood struck their villages and in less than a minute village were filled up with flood water. Due to heavy flood the connecting bridges between the districts were washed away and means of communication were badly affected. Means of communication were destroyed as the flood tore down the mobile towers and poles of electricity. This made communication gap with the authorities and delayed emergency help.

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Chapter 1

1. Introduction

In developing as well as in developed countries people may have great impacts on the livelihood as well as overall social and economic negative impacts. During the past two decades, natural disasters have killed millions of people, unfavorably affected the lives of at least 1 billion or more people, and resulted in substantial economic costs.

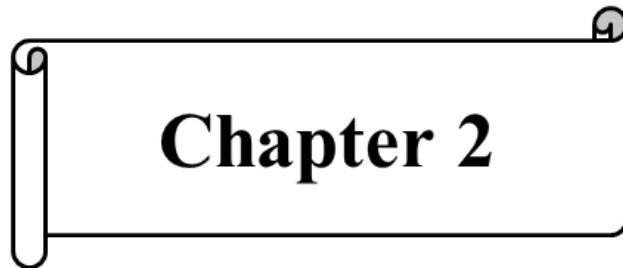
According to the reports of the International Federation of Red Cross and Red Crescent during the past ten years from 1993 to 2002 floods have affected an average 140 million people each year (IFRC, 2003, p179).

The main cause of flooding is due to heavy rain fall making the water level of rivers rise up. In August 2002 for instance continuous rain fall caused flooding in Eastern and Central Europe (Caspary et al., 2004). Such flooding will possibly be even more frequent because of the ongoing global warming (Houghton et al., 2001).

Many developing countries are heavily affected because they lack necessary resources, infrastructure, and disaster-preparedness systems. In developing countries the lack of economic resources, frequent political instability, wars and conflicts tends to aggravate the effects of natural disasters such as earthquakes, volcanic eruptions and cyclones and their livelihood negativity. (Blaikie et al, 1994). Meanwhile, the institutionalization of mitigation strategies and preparedness for disaster response which are essential in order to reduce the level of risk for such events. (O. zerdem & Jacoby, 2006).

Pakistan is very vulnerable to natural disasters. These disasters are mainly caused by floods, earthquakes, drought, cyclones and landslide. Floods are historically most frequent occurring during the country's history a big damage to the livelihood infrastructure with severe implementation of livelihood. In August 2010 a flood in the Indus River affected nearly 20 million people (one tenth of Pakistan population). Almost 1.6 million homes were also destroyed

in KP Province and the major land for the crops and cultivation were damaged there was also soil erosion in some areas (World Bank 2010). While according to some authors (Kahlowan, 2002) in the country they believe that the flooding was caused by changing patterns of climate, others argued that it was caused by heavy human activities such as by deforestation, over use of natural resources causing severe pressure on the earth's resources. Changes in land use through actions such as deforestation, making new building and cities, the storage and use of water, and the use of energy are all important factors. The main cause of the flood was the unpredicted rain during the monsoon, it rained continuously for more than 72 hours which was four times more than the average rain in monsoon period(3 462 mm of an average) which was the main cause of the flooding in river Kabul and river Swat (Metrology department of Pakistan).



Chapter 2

2. Research problem

The study explores issues of the economic impacts of the flood in 2010 on small scale farmers in Pakistan. Furthermore I intend to investigate the strategies the affected people employ so as to mitigate the negative consequences and its impact on small scale farmers and agricultural production. The flood caused a significant impact in terms of economic and human losses. People of the affected district are irrigating their lands again and trying to return to their livelihood. Most of the governmental and International organizations are trying to restore the livelihood of the people.

2.1. Research question

- In order to reach the aim I have analyzed on crop production, yield before and after the flood and the role of the middle man in relation to the small scale farmers.
- What was the role of governmental and non-governmental organizations at the time of the flood in the affected district and what their interventions for the livelihood of the people.

2.2. Research methodology

2.2.1. Data collection method

In order to conduct this study I have relied on telephone interviews with small and big scale farmers in the rural areas of district Nowshera KPK (Province). To make a comparison of the losses I interviewed big farmers as well. The interviews are semi structured. I have also made an extensive research, based on previous research, newspapers, literature review, reports from the government departments and NGOs.

2.2.2. Data Collection

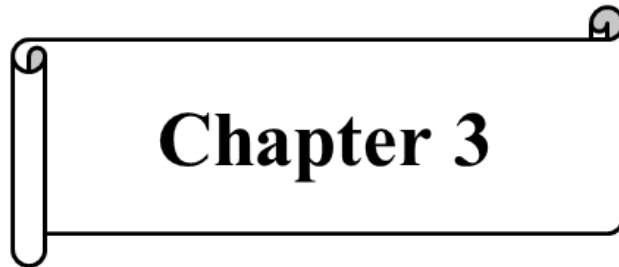
The research has been based on purposive sampling. Purposive sampling is a type of qualitative research. Particular groups have been contacted who are affected in the flood. Miles and Huberman (1994, pp.27-28) argues that qualitative sampling can provide the opportunity to select and examine the observation and processes in our understanding of the phenomena being studied. I worked as a volunteer with a local NGO Al-khidmat Foundation and helped the people who had been affected. District Nowshera is near my home town and I use to go there on weekends to meet our relatives. Most of the people are practicing farming in the area I got the help of Al-Khidmat Foundation and one of my x classmates who is from the same town and is a practical farmer by the collaboration from both of them I conducted purposive sampling on telephone.

2.2.3. Response point

In order to collect my data I contacted small scale farmers as well as NGO's (non-governmental Organizations) and many stake holders. I contacted twenty farmers in total by telephone and arranged the day and time suitable for an interview but only seven of the farmers showed up. In the same way questionnaires were prepared and send to four international NGOs but only one answered.

2.2.4. Limitation of the study

During the interview it is necessary to remember that the main aim of the researcher is to collect data rather than changing the view of the respondents (Gray 2004, pg.35). In Pushtton culture they are very reserve regarding their families. They prefer not to share the information of their females and head of households in their family, during my interviews I had to avoid these issues in order to be able to conduct the interviews.



Chapter 3

3. Back ground of the flood

Pakistan is among one of the most hazard-prone countries in Asia. Natural and manmade disasters are always a threat to the economy and livelihood opportunities of the country. Furthermore Pakistan is also vulnerable to natural disasters such as cyclones, droughts, landslides and erosions caused by these disasters. In addition to these disasters manmade disasters have always been a threat to the economy of the country such as civil conflicts, terrorism and internal displacement of people. Such types of natural and manmade disasters have always been causing a widespread of damage to the country's economy. Pakistan has inadequate surface and ground water assets, annual water per capita has been reduced from 5 600m³ at the time of independence 1947 to a meager of 1 200m³ during 2001(Kahlowan, 2002). 1998-2001 Pakistan faced one of the worst droughts in its entire history over 3.3 million people were affected either directly or indirectly. Thousands of people travelled from the area affected by drought and some lost their lives due to hunger and thirst, furthermore 30 million livestock were also affected due to scarcity of water and fodder (Pomee, Zaheer-ul-Ikram, Khan and Ali 2005). In terms of agriculture Pakistan is located in arid and semi-arid area, with 68 000m² of the land laying in the region where annual rain fall is less than 300mm (GOP, 1987;Khan 2004d). According to the reports of FAO (Food and agriculture organization) Pakistan total water availability per capita among the 26 Asian countries is very less it is estimated that water scarcity will occur before 2035 (FAO 2008).

The recent economic crises and flooding has increased poverty and decreased people's access to food in the country. FAO estimated that 17 million people have become food insecure as a result

of food prices have gone up during the recent years and most of the poor people were spending seventy percent of their income on food, even before the flooding. FAO estimated that 60 million people were food insecure at the time of the flood in Pakistan this amounts to half of the population of the country. “United Nations stated that, the current floods in Pakistan are the greatest humanitarian crisis in current history, more people are affected than by the South East Asian tsunami and the Earthquake in Kashmir and Haiti.”

Pakistan is one of the most natural disaster prone countries of the World (Ahmad, 1990). Natural disasters bring a great loss in terms of health and property. In Pakistan 40 percent of the land is exposed to earthquakes, 6 percent to cyclones, 60 percent to flood and some are vulnerable to drought which accounts 25 percent of the land (Ghauri , 1963; Gazdar , 1987). Flooding can cause damage to the population directly and indirectly for instance in terms of direct impact it can cause damage to land, agriculture, infrastructure, deaths and injuries and in terms of indirectly impact it disturbs the agriculture production, water channels and water borne diseases (WHO, 2011)

**PROVINCIAL AND NATIONAL LOSS OF LIFE INJURY AND PROPERTY LOSS IN
2010 FLOOD IN PAKISTAN**

Province	Deaths	Injured	House/damages destroyed	Total affed distrt	Population affected	Croppd Area(h)	Cattle head
Khyber Pakhtoonkhwa	1156	1198	200799	24	3800000	205374	52750
Balochistan	48	98	75261	12	700000	255237	55501
Punjab	110	350	509814	11	8200000	692847	4193
Sindh	234	1201	1114629	17	7356550	1097057	263670
Azad Jammu and Kashmir	71	87	106	7	200000	30820	288
Gilgit Baltistan	183	60	2830	7	100000	3635	4669

Source: (SAARC, 2010) Disaster Management Center New Dehli

The farming system of Pakistan is mainly based on small landholders. The Prime Minister’s secretariat (public) or government of Pakistan Board of Investment (pakboi) claims that a major part of arable land of Pakistan is cultivated by small farmers, with 86 per cent of the total number of farms comprising less than 12.5 acres. The small farms are continuously decreasing because of land division due to inheritance. This is impacting agricultural productivity, as small farmers are generally resource poor and need greater attention. Small farmers face hurdles to have water for their cropping Bhatti et al (2009).

The U.S. National Governor’s Association (1979) has defined four phases of disaster activity as mitigation, preparedness, response, and recovery in their report in 1979, for an approach to disaster management (Neal 1997). The four phases are defined by Godschalk et al. (1999) as follows “Preparation includes short-term preparation activities, such as evacuation and warning; response includes short-term emergency aid and assistance, such as search and rescue, debris clearance; recovery includes post-disaster activities, such as rebuilding of damaged structures

and restoration of existing operations; and mitigation includes any action taken to reduce or eliminate the long-term risk to human life and property from disasters” (Godschalk et al. 1999).

For example countries like Bangladesh are also vulnerable to natural disasters such as floods, droughts and cyclones. Flooding is a common phenomena in Bangladesh and it experiences flooding almost every year. About 140 million people of Bangladesh depends on agriculture, during the monsoon (June to Early October) season flood causes a great damage to the agriculture and livelihood of the people (Bramer;2004, Paul 1984). The damage and disasters due to flooding in Bangladesh has been increased during the past few years; one third of the population of the country is concentrated to plains and is exposed to flood (Rasid and Paul, 1987).

The Indus River affects directly and indirectly in Pakistan. In terms of direct affects it take away the livelihood of the people, destroying the crops which was the survival for them, the general stores where everyone have access to buy the basic needs for their survival and in terms of indirect effects the flood has displaced the people with in the country and has long lasting effects on their economic condition and health, more than 20 million people (one tenth of Pakistan population) has been affected during the flood. Agricultural plays an important role in the economy of the country. Almost 70 percent of the population of the country is engaged in this sector either directly or indirectly. Having a population of approximately 160 million with 32% living below the poverty line, the country has serious challenges to overcome (ESP, 2007). Poverty is generally greater in rural areas than in urban areas. According to NDMA estimated 2,244,644 hectors of crop land was destroyed during the flood but instantly after the water withdrew farmers started cultivating their crops in the sediment land. Still large areas are under mud with additional moisture stopping them to cultivate the land as the farmers are not having the seed for their crops and livestock which help them during the cultivation of the land all are taken away by the flood water but it would be cultivated soon after the rise in temperature and the water goes down. In some areas government organizations and donors, as well as NGOs, help people to re-cultivate their damaged agriculture land. Small and big scale farmers were both affected by the flood either directly or indirectly both crops and livestock were lost. According to the estimates by the government of Pakistan cash crops such as cotton, sugarcane and rice were largely affected by the flood during the planting season. Pakistan has two cropping season

namely Rabi and Kharif. For Kharif the sowing season starts from April to June and harvested during October to December, while Rabi begins in October to December and harvested in April to May. Rice, sugarcane, cotton, maize, jawar, bajara and mash for Kharif crops wheat, gram, lentil, tobacco, and barley are Rabi crops. Major crops like wheat, rice, cotton and sugarcane are cash crops (government of Pakistan report 2011a:16). Floods brought about a critical food crisis by destroying many crops soon before the harvesting season, due to which the food prices were increased very high and the purchasing power of the affected population fell suddenly. On the other hand, the floods impact on the availability of food was severe since it damaged agriculture production. About 80% of food assets were lost, (worth \$1 billion) were destroyed (including a third of the rice planted in 2010), and hundreds of thousands of livestock and poultry died (WFP, 2010). In KP Province grazing animals and poultry were lost in the plain areas and approximately 200,000 livestock for instance cows, sheep's and horses were initially reported dead. The flood caused a great impact on agriculture crops and reduced the production of the crops to 1.2 percent 2010-2011 against the target of 3.8 percent. The flood caused a negative impact on all the crops which have been planted in the season. The flood caused a large damage to both small and big scale farmers in Pakistan, although the small scale farmers were not that much sound financially before the flood but after the flood, it took away the remaining livelihood from them. These farmers are the most vulnerable and lives in poverty line (government of Pakistan 2011a:221). The flood reduced the accessibility of food, destroying agriculture production. About 80 percent of the food reserves were lost standing crops having worth of billions of US\$ were destroyed and killing hundreds thousands of live stocks and poultry died (WFP, 2010). In the United Nation Human Development Index of 2010, Pakistan ranked 125 out of 169 countries. One third of the population of Pakistan is living on less than one US \$ a day. One out of ten children are unable to survive to the age of five and about 42 million children between the age of 5 to 19 don't go to School (Report of Aus. Aid 2010:4). Poverty and hunger is wide spread in the rural areas of Pakistan. Two third of the population 35 million people, live in the remote areas of the country. According to the reports of FAO 2010 due to flooding additional 17 million people risked hunger due to food price inflation. More than 70 percent of the income of these people is used on food, FAO estimated that before flooding 60 million people were food insecure which represents half of the population of the country (Report of FAO 2010). Flooding can increase water born disease and standing water is an ideal place for the

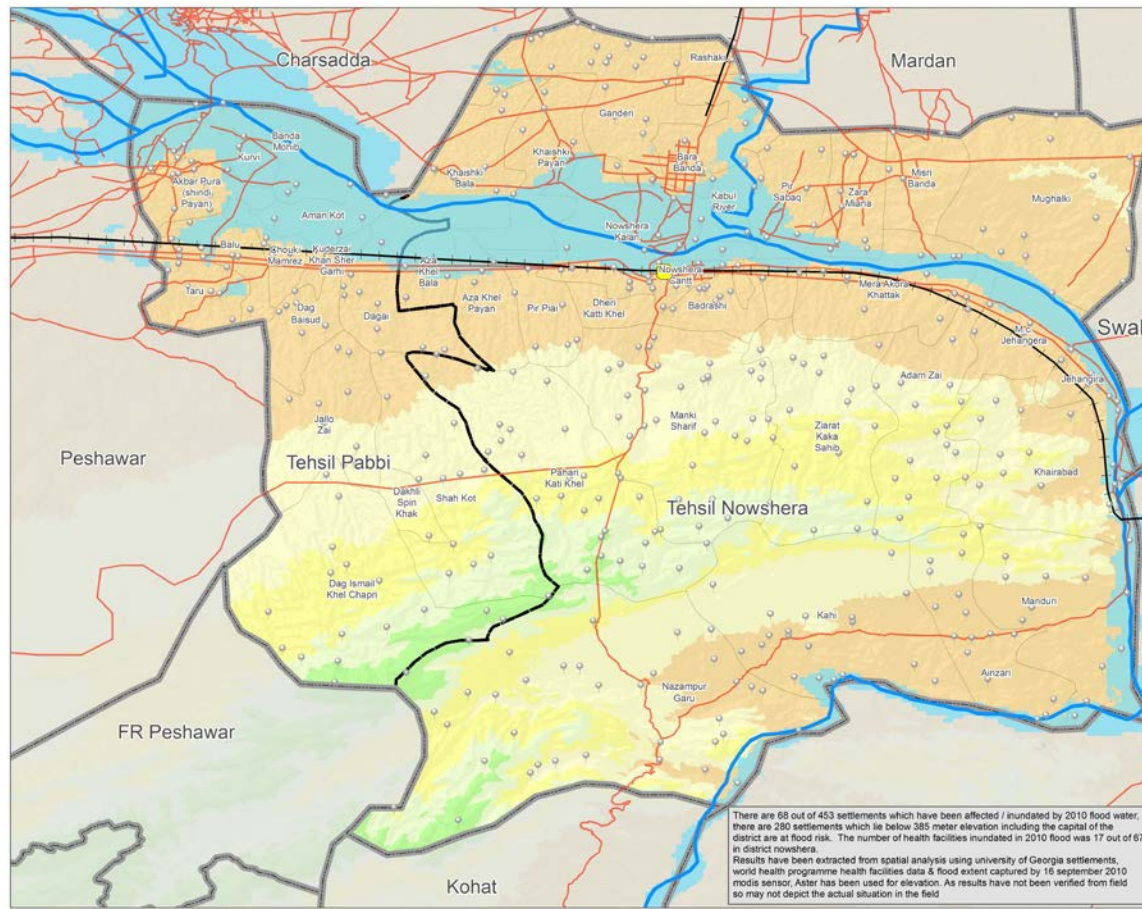
breeding of mosquitoes and during such circumstances when a country is facing a disaster in terms of flood women and children are the most vulnerable to water born disease as most of the time they have to stay at their homes and in Pushtoon culture they can't move freely according to their own desire. WHO(World Health Organization) and Pakistan health cluster reported that five hundred hospitals and health centers have been destroyed during the flood , limited number of female health workers and only 3.5 million people have access to contaminated water such type of risks due to flooding has increased number of casualties in the affected districts(WHO 2010). WHO and health Clusters have treated many cases like diarrhea and cholera, the affected areas are still short of clean drinking water and according to an estimate WHO has treated 1.5 million cases of diarrheal disease (including 140,000 cholera disease) and 100,000 of malarial disease patient over the next three months of the flood and still there is a threat of dengue fever Crimean-Congo haemorrhagic fever (CCHF) polio to children and to pregnant women's (WHO2010).

Due to the vague and insufficient policies of the government the irrigation system is poor infrastructure and lacks maintenance (Report of World Bank 2005). Some of the projects for the maintains of dams like Tarbela and Mangla were funded by different donor agencies, but due to corruption it was misused and was in the hands of the bureaucracy, for example in Punjab Province to develop the irrigation system it is estimated U.S \$20 billion by the government but in reality it requires an estimate of \$ 0.6 billion, 76 percent of the budget was used for their personal use not on the project (World bank 2005, 58). Due to water shortage many farmers don't trust on surface irrigation most of them have connected tube wells (Ground water) on their farms, more than 75 percent increase in water supply came from tube wells (World Bank 2005,39). Dramatic increase have been seen in the installment of tube wells on the farms, from 98 000 in 1971 to 904 688 in 2004 (Husnain 2004,9). Tube wells are very costly, they cost thirty times more than the canal system, the benefit of tube well for the farmer is that they can irrigate the field when the crops need to be irrigated while the irrigation by canal system is highly unpredictable. (World, Bank 2005, 32). According to the newspaper THE NEWS (18.10.2010) "Pakistan economy is already shaking and is mostly dependent on loans from World bank and IMF (International Monitoring Fund) and some donor agencies to fulfill their needs, but during the flood the economy of the country was not strong enough to mitigate the challenges of the flood and the government took twice the loans from the supporting agencies to full fill the needs

of the people”. Furthermore newspaper The Dawn reported (1.12.2010) “The flood affected people were in the refugee camp and everyone wants to go back to their village as the facilities in the camps were not sufficient and due to the tribal system they are very conservative and possessive about their women’s they don’t want to expose their women to other people and during the flood women from the tribes were restricted mostly inside the camps. Turkish NGO had distributed shovels and sickles among the farmers so that when they can go back and to cultivate their land, but most of the farmers sold them out in a common market on less price as the people were short of money and wants money for their survival. Some of the people left the refugee camp and moved back to their village finding everything destroyed by the flood and in miserable condition. The most shocking thing was that labors were not available most of them were busy in rebuilding of their own houses or were looking for aid, the labor who were willing to rebuild the damaged houses were charging double then before.”

My study area is in Province Khyber Pakhtoonkha (formally known as NWFP) district Nowshera. Most of the people of those areas are mainly dependent on agriculture and livestock for their livelihood, wheat, rice, potato, maize sugarcane, and fodder are major crops of this area. The area is located near the Kabul River. The flash floods in KP province have caused a big damage to economy and to people’s ability to support them. Most of the agriculture land and standing crops have been destroyed due to tragic event. Flooding is most depriving natural hazards in Pakistan the characteristics of flooding varies from region to region. Monsoon rain is the main source of flood in Indus basin while Mediterranean waves and cyclones which produce over the Arabian Sea are the cause of flooding in Makran coastal areas of the country side. According to the reports of federal flood commission (FFC) about 60 percent of the damages are reported in KP during the flood 2010. Floods in KP are limited to district Nowshera, Charsadda and Peshawar which are near Kabul River while in rest of the area of the province flooding is a common disaster along with the landslides and torrential rain (PMD, 2009).

District Nowshera view:

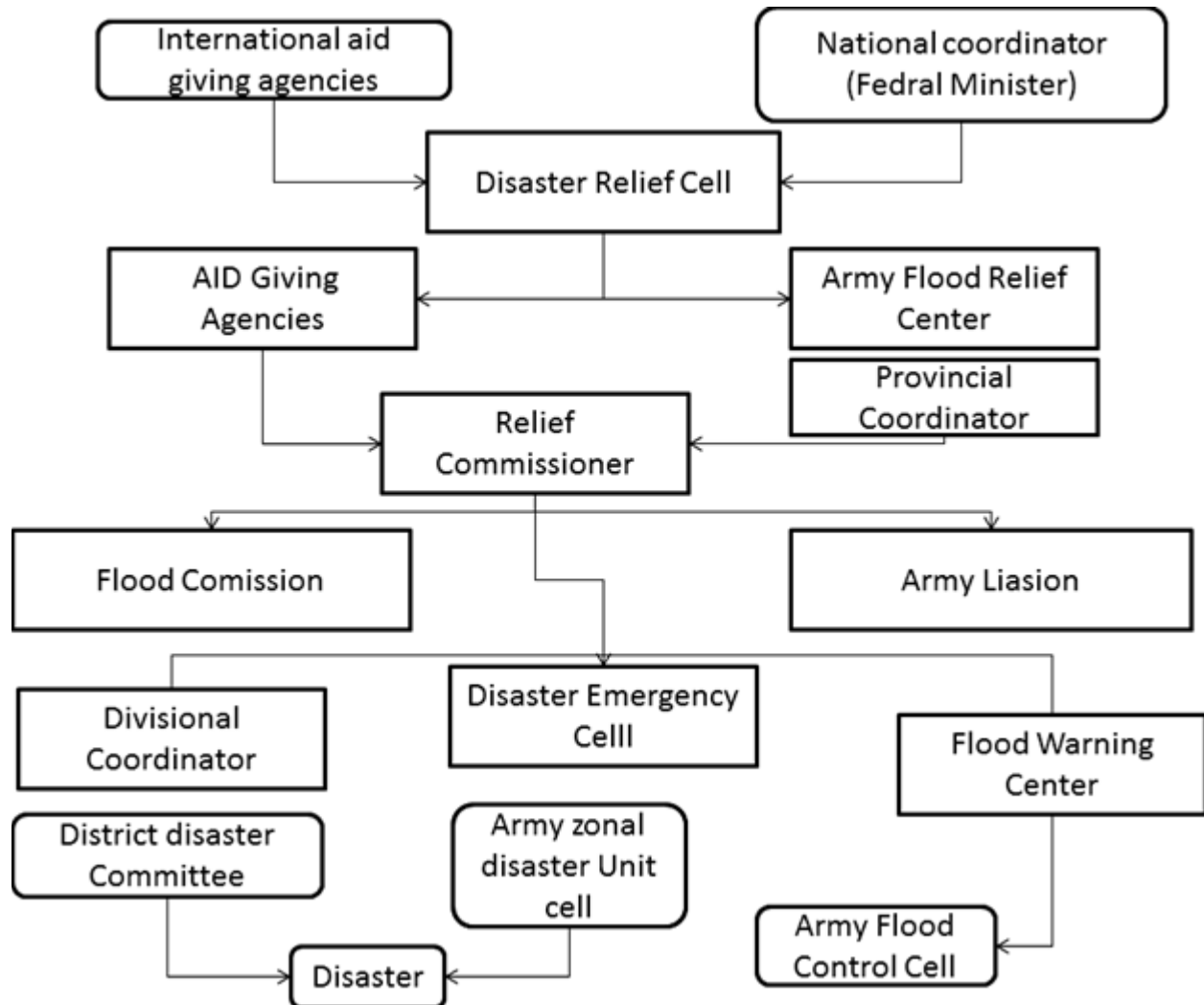


Source: www.immap.org

3.1. Role of Pakistan military during the Flood

Relief activities were carried out by Pakistan government, Pakistan army and different International organizations such as United Nations children fund's (UNICEF), United States agency for International development (USAID) and World health organization (WHO). Pakistan army provided a major role in rescuing the people. The government responded to the flood during the initial days but it was not that much sufficient which shows the lack of will by political leaders. One of the respondent stated that "The politicians don't bother and even they don't visits the affected areas of the flood from where they revived more votes during the elections".

Pakistan army is running The “National Disaster Organization” which is functioning both at National and Provincial level, under this first comes Flood protection, Relief commissioner , National and International agencies giving aids for the assessment of the project and a series of operation which are functioning as shown in the figure.



References: www.pakistanarmy.gov.pk

Pakistan Army with collaboration of national Disaster management organization played a vital role during the 2010 monsoon flood. According to media reports Army deployed over 40 000-60 000 troops and 300 helicopters moving around the affected areas and rescuing the people.

Several doctors both male and female and Para medical staff also reached to the affected areas and helped the victims



Picture showing relief activities by Pakistan military

Source: www.boston.com

3.2. Gender Issues during the flood

Gender relations are defined as the social construction of roles and relationship between women and men (Baden and Goetz, 1998). The socially constructed roles are mostly unequal in terms of power, decision making, ownership or resources for this reason gender are much more about power and inequalities (F. Ellis, pg139).

During the flood in Nowshera women have suffered a lot in terms of their house, land and displacement from one part of the city to another part for their survival. As mentioned by one of the interviewer she is a widow and in this male dominated society nobody cares for the rights of the female. The women and children who used to sleep in their houses were supposed to sleep in tents and more specifically the women of the village have never slept outside in open air but due to flood they were having no option at all. The government did not support them and even they don't visit their camps to see in which condition they are. One of the interviewers reported that when there was a lorry or relief package in the area all the men were running to catch food items no boundary and arrangement for the females so that they can also have some relief goods. The farmers of the area were already in great loss due to tragic event and such type of activities takes away the remaining livelihood from them.

The victimization of women at the time of emergency or uncertainty as well as the productive role by them in making the community and coping strategies at the time of tragic event (Akcar, 2001; Bari, 1998). Pakistan national disaster management authority (NDMA) plays a vital role at the time of disaster or shocks and provides initial tools to mitigate infrastructure and vulnerability. UN agencies along with gender task forces involving different stakeholders to get technical provision and increase gender issues at different forums. According to UN women (2010) Pakistan majority of the women had no access to the communicating tools such as loud speakers, mobiles, so that they can communicate to each other (UN Women, 2010). Some of the affected women during the flood reported that the hygienic condition were not that much good and they were reusing the towels and were drinking contaminated water. There were no security measures by the authorities and they were having their own watch groups (ibid). As most of the women were living in tents and there was not that much privacy some women reported cases of

sexual harassment in the camps because of different groups of people and some of them even could not sleep all night because of strangers(Ibid).



Source: Author

Picture showing the displaced people during the flood living in temporary camps in district Nowshera

Chapter 4

4. Interviews

4.1. Interviews of the farmers

Response of the farmers							
Name of Farmer	Gender	Age	Type of farmers	Land size	Crop production before/after flood	Network of farmers	Agreement between the farmers and middle man
Atif	Male	29	Small scale farmer	4.0 hectares	8mund-10mund	Middle man	Verbal
Bashir	Male	38	Small scale farmer	2.83 hectares	6 mund-9 mund	Middle man	Verbal
Caleem	Male	43	Big farmer	14.16 hectares	40mund-51mund	Middle man	Written
Darkansha	Female	40	Small farmer	4.85 hectares	14mund-10mund	Middle man	Verbal
Emmad	Male	50	Progressive farmer	12.14 hectares	27mund-31mund	Government departments	Written
Fahad	Male	38	Middle man				Verbal



Source: www.dailytelegraph.com.au

Aerial view of flood affected area district Nowshera

4.1.1. Farmer Atif

He is a small scale farmer young man aged 29 in district Nowshera. The farmer is head of household of the family comprising seven members at his family. He used to live in a combine family along with his uncle. Combine family system is very common in rural areas of Pakistan where most of the relatives and family members live together in a big house. The farmer cultivates the land along with the help of his family members. The main source of his livelihood is agriculture comprising a land of about 4.0 hectare. Some of the land has been gifted to him by his father. He practices different crops like wheat, potato, fodder and sugarcane. The farmer use

to sell out 70 percent of his agriculture produce and the remaining he stores it for his daily use. His land is irrigated land and used to cultivate the land with the canal system which is most common in Pakistan. From canals system there are different water channels which are derived from the main canal that further help him to irrigate his field, some part of the land used to be cultivated by tube wells but after the flood has affected his area disturbing the water channels taking away the livelihood of the farmer. All the crops were destroyed by the flood along with his livestock. According to him government and non-government organizations have been active. Different NGO's and donors such as FAO (Food and agriculture organization) USAID (United States Agency for International Development) have provided the small scale farmers with fertilizers, urea and seeds so that they can cultivate their land again after the flood. The government of Pakistan announced a relief package of \$ 600 to each union council that has been affected during the flood in district Nowshera. Pakistan military also contributed during the flood and help to rescue the people by boats and helicopters.

The social setup of the farmer was also disturbed during the flood. As the flood water take away the livelihood and resources from the farmer so he was not in a condition to go anywhere to the marriages in other village as he was short of money. The farmer informed me in order to get some money he used to sell the things that he got during the relief activities in a market on less price. The flood water damages the farmer not only economically but also socially.

Recently the farmers of district Nowshera is cultivating the land again and this time he is cultivating maize and sugarcane as the fertility of the land has increased due to flood, but the speed of water has been slowed down in the water channels as they are filled by silt and sand. The farmer also informed about the middleman who used to carry and buy the stuff from the producers to the big markets. There is no written agreement between them and its verbal agreement and it only depends on trust. The farmer was not that much satisfied with the middle man as he was charging him a lot for the transportation but he has no option to send his product to the markets

Analysis of Farmer Atif:

Is a small scale farmer, main source of his income is agriculture and lives of course in the rural areas of KP province. He is the only household of his family having two sisters. His father used to be a driver at the government office but now he has got his retirement and sometimes helps his son in farming. The financial condition of the farmer is not that much strong to produce more also due to the flood the condition of his land and house has been affected badly. The flood water washed away his livelihood from him and making the things more difficult for him to survive. The farmer was using old method of cultivation by means of cows to cultivate his land and don't use modern equipment and technique because of the reason that he was financially weak and other is that he was not that much educated, but the flood water has taken away even his traditional way of cultivation from him, the other thing is that there is no company from the government side who can help or support these farmers by providing them good feedback according to the condition of their land so that they can produce more. Most of the farmers in the village help each other during cultivation of the land due to their traditional system and because of the fact they are from the same village. The household in the village has to make good connection for his social set up in order to mitigate the challenges at the time of disaster. Middleman takes the advantage of the financial condition of the farmer A as he takes loans from him for his land and sometimes middle man is rude to him and give him less money to his produce but the farmer has no option he follows him as he wants to keep a good relation with him for his survival.

4.1.2. Farmer Bashir

He is a 38 years old man, and comprises a land of 2.83 hectare, comprising five members in his households. He used to cultivate his land with his brother who lives next to his house along with the support of other family members. The farmer practices different crops on his land like potato, wheat and sugarcane. For domestic purpose the farmer and his brother saves a small amount of the produce as they don't have a big store house and most of the agriculture produce they sell it out. The farmer used to irrigate the field through water channels from canals and sometimes when there is no water in canals he prefers to use tube wells water with the support of the generators. The flood has affected his land and his house where he used to live as his house

was very close to his fields. The flood water knocks on the door of the farmer at 3am in the morning when he was sleeping. The farmer has 5 children's out of which one was killed by the flood water. Before the flood there was no big hospital in his area, but a small dispensary where people used to go for medication but the flood water has washed away that dispensary too and the people thus faced a lot of problems regarding their health issues as many of the mosquitos came from the standing water and after that Cholera was common disease in their area taking away the life of many people including one of his younger sister. Nobody came on time to help the affected people from the disease as a result the disease spread like a fire in a village. The farmer is having one livestock cow now as he has sold out 6 of them in the markets for his survival. The farmer used to sell potato by his own in the market and the remaining two crops he prefers to sell it through a middle man. The farmer informed about the middle man that he is a family friend of him and he sells his products on good price and give him the money soon when he sells his products and he never had problems with him.

Different government and organization have been active in rescuing the people and helping the victims of the flood. According to the farmer government organizations were active in their village. Government started a campaign by providing Watten cards to the affected people. According to the farmer he has received 211 U.S \$ each month by this card and up till now he has received two more installment of it and in total he has received U.S \$ 633.4 but NGOs were not that much active in district Nowshera.

During the Interview the farmer informed me about some crime activities which took place during the flood. Some criminal water diver's jump into the houses of the people as there was no one at home and they started doing robbery in the houses and taking away the things that were left in the houses. He informed me about his uncle's house where he found such type of activities, when the water level went down and the affected families came back to their houses they found their lockers are broken where they use to save the entire income from the crops.

Now a day in his village they have started farming again land is fertile and they are practicing sugarcane, potato and maize. The farmer along with the other elders of village is demanding incentives from the government and non-government on electricity and to rebuild at least two more dispensaries in the affected area.

Watan Card

Watan card is a program started by the government of Pakistan during the flood and relief activities. Through this Card system the affected people from the flood were given cash. The principal to get a Watan Card one must have his NIC (National Identity Card) so that it can be proved that they are from the affected area.

Furthermore most of the people have lost their NIC during the flood but by providing their personal data and information they were traced out and were given new identity cards as well. In the rural areas of Pakistan most of the people are not that much educated and they feel scared by making their National identity card. They feel that if they make it government can put tax on them so they mostly dependent on local government system and in the same way some of the tenants also never made NIC cards and they are depending on their land lord mostly.

4.1.3. Farmer Caleem

Is a big farmer aged 43 He is the head of household his family having a big family with four sons and two daughters in district Nowshera. His main source of income is agriculture and poultry farming. He has four tenants who helped him during the farming. The farmer used to cultivate wheat, maize, rice, and sugarcane on his farm. He used to irrigate his field through canals as his land is very close to canals. Two of his sons are also practicing farming with him while the other two sons have not that much interest in farming, they are living in towns and doing job in a factory. One of his son go to School for education and now he is in high School of the government, the farmer is very happy that his son has interest to be educated after the School he helps his father in farming on the fields.

Beside agriculture the farmer also practices poultry farming near his farm and has around 1000 chickens on his poultry farm and earns handsome amount of money from it. The farmer informed me about SLSP (Strengthening of Livestock Services projects) by European Union and the objective of that project was to support the livestock of the country, SLSP was having their offices in each corner of the country but due to corruption and instability it was finished soon. This project helped him in making the poultry farm and giving him some chickens in the beginning with lesser price comparatively to the markets. The farmer uses a middleman to sell

his products to the big markets for that purpose he do written agreement with the middle man that he will be responsible to give him the money on time. He does not believe in verbal agreement. The farmer explained me in detail about the flood as his land was very close to canal, the time the flood came was around 3 am in the morning and he was sleeping at that time as there was no early warning by the government side so that he could have done some preventive measures. The flood increased the water level in the canals and it destroyed all the standing crops which were near to harvest. The flood water took away the livelihood of the farmer and damages his home and poultry farm almost all of the chickens died during the flood. The farmer is living in a very remote village and he did not get any compensation from the government but some NGOs like FAO have visited his village and provided fertilizers and seed along with the collaboration of local organization IK Imran Khan foundation which also provided seeds and promised to provide chickens too when the water level will go down.

Now days he is practicing farming again and growing rice, potato and sugarcane. The crop he produces now is in good and healthy condition. He is having poultry farm again as IK foundation helped him in rebuilding of the poultry farm and provided him chickens. One of his sons is looking after the poultry farm. The flood water caused a big damage to the high school and the government did not rebuild it until now the education of his son has been affected but he has now got admission recently in private school although it's expensive but due to his interest the farmer is supporting his education. The tenants who used to work on the farm are now back on the farm they also have a great loss during the flood. The farmer is satisfied with the middle man as he has written agreement with him so he gives the money on time to the farmer.

4.1.4. Farmer Darkansha

She is 40 year old woman. She is a widow as her husband died two years before in Suicide attack in a market. She used to practice farming along with her husband before on the farm. She supported her husband during the farming. She used to practice grading of the crops She is having a 23 years old son. He also practices farming on the same land of his father along with his mother and relatives. He practices to irrigate the fields by canal through water channels. He used to produce tomato, potato and wheat and was having 4 milking cows on their farm. Her son used to sell the surplus milk in the near market and earns some money from it and supports her mother and covers the expenses of his home. At the time of the flood they faced a lot of problems. The flood water washed away all their agriculture products on the farm and also a small store house

in which they have saved wheat and potato. Two of the milking cows were also killed by the flood water.

According to the widow the government of Pakistan and non-governmental organizations such as UNHCR has not supported at the time of the flood. She along with his son left the village and move out to the next village as some of their relatives used to live there and they were economically sound as most of the family members were abroad and they were doing jobs in a construction company in Dubai. She was very thankful to the hospitality of the people they provided them shelter and food and fodder to the remaining two milking cows. As the flood water took away all of things which they use in everyday life. She informed me that they were in shock and had no idea what has happened, but she was very religious and said this is all done by God and that will give them happiness. She don't want to go again and again to the government relief camp for help since they were not that much cooperative and there were no proper arrangements for the women in terms of getting the relief goods from the relief camp.

His son said that the middle man is very cooperative, and his family trusts him as he was a close friend of his father. They have a verbal agreement on selling of their crops and he always pay them the money on time.

At the present they are growing only wheat on their land as they did not get seed for other crops from any organization. Some of the seeds have been given to them by their neighbor's and the remaining they have bought from the market. The quality of the crop is not bad and they are producing less than before. Her son informed me that his only option was to get loan from the bank so he put the property papers of her mother's land in the bank and is hoping to get some loan on it and soon then will invest on land and will buy some milking cows as well.

Analysis of Farmer Darkansha:

She is a small scale farmer in district Nowshera as she is widow and has only one son to support her in agriculture. During the interview she told me that she is very upset as because of the terrorism in the country she has lost her husband. After that event another incident came to her life in terms of flood and takes away the entire livelihood from her whatever her husband and she did for their agriculture land in the beginning and was taken away in a minute by flood. During the interview she informed me about the monopoly of the shopkeepers at that time. She stated

that the prices of everything boost up very fast during the flood. Common bread (Chapti local name) was at U.S \$ 0.05 but during the flood it raises up to U.S \$ 0.15 and the same was for other food commodities that were used in daily life. The displaced people who don't get tent from the government side went to cities for a short time but in cities people started business with them and were renting the houses as double price than before. She criticized government for not supporting the affected peoples on time, further she stated some of the products that were from some International NGOs has not been reached to them and were sold out in a common market on less price she also bought some stuff from that market which was labeled with UNHCR.

4.1.5. Farmer Emmad

Is 50 years old man and is a progressive farmer in district Nowshera. The crop production is two times more than the small scale farmers as they are not practicing the traditional farming. His main source of income is agriculture. He used to produce wheat, maize and sugarcane on his farm. The farmer has 3 tenants who used to work with him on the farm. The farmer has no son. The farmer is a big farmer. He earns more money than any other farmer in his village. He used to keep a small percentage of production for his domestic purpose and rest of it he sells it. The farmer use to irrigate his land by canals. The flood water caused the biggest damage to him that he had never experienced. The flood water washed away all of his crops and caused damage to his land and property. The farmer told me that he was lucky since two days before the flood he went to marriage ceremony of his younger brother to the city with his wife so he was safe during the flood.

The farmer was very happy to see the involvement of the government and different local and International NGOs at this tragic time. The elder brother of the farmer is in politics and he has a good position in the present government. The farmer used to get some help and support from his brother at the time of uncertainty and due to good network and connections with other people he used to give him feedback on appropriate time. Due to good relations with his brother and the government the farmer received a good package from the government side and they provided him good quality of seed for wheat and U.S\$ 500 to full fill the damages that caused to his property, in addition to that FAO promised to make a store house on his farm after the flood

where he can store his agriculture products. The farmer don't need the help of middleman as he is a big farmer whatever he produces he sells it directly to the government and the government has made a written contract with him and each year government gives him good package while having his agriculture products. He does not need any transportation as the big lorries from the government side comes and load all the stuff from his farm so he gets an advantage of that also government sometimes send a professional agronomist to his land which give him good suggestion how he can produce more, which fertilizers are good for his crop by this way he gets improvement in his production.

At the present he has started farming again and the production of wheat is very good this time as land is much fertile now in addition to that he used some good quality of wheat seeds from the government. FAO has recently started construction of the store house on his land. The farmer looked very excited at the time of interview that the circle of his production which was disturbed in the flood in now back and is much good condition now.

4.1.6. Middleman Fahad

He is a middle man of 38 years. The main source of his income is agriculture commodities. He purchases the agriculture products from farms and sells it in the big markets, where there are many dealers who are interested to buy from him. According to him he is facing some problems during the transportation as the petrol price has increased a lot during the recent years so he don't earns as much as he used to do before the flood, For example before the flood he would earn U.S \$ 211 a week and now he earns U.S \$137. He further stated that it is difficult to find an honest farmer from whom he is buying the agriculture products. Sometime the quality of the produce is bad and he loses money. The contract type between the middleman and the farmer is mostly verbal and they are seldom written agreements with most of the farmers. Mostly with most of the farmers Middle man has good network and communication so he used to help other farmers in terms of loans from the bank or if they need any assistance for their crops.

During the flood the middleman also faced lots of problem. His business was based on big Lorries and on transportation of agriculture commodities. As most of the Lorries were damaged during the flood and as these Lorries have no insurance from any company, he had to repair them by his own which was very costly. He did not get any support or compensation from the

government side as none of them gave importance on damaged transportation mostly all were busy in rescuing and making camps for the people.

The present condition now is that his two big main Lorries are out of order and needs lot of work to repair it and it cost that much that he can buy a new lorry on them. He was not satisfied with the government relief activities.

Interview With non-governmental Organization (USAID United States Agency for International Development)

Interviewer Name: Baber Ahmed Shekeel

Designation: USAID/Pakistan/ Exo

USAID has been working in Pakistan for more than 60 years. OFDA is the office within USAID responsible for providing non-food humanitarian assistance in response to international crises and disasters. It is aimed at working with the local affected communities, farmers through its implementing partners to reduce the impact of disaster and try to mitigate the after affects. “Different programs are in running positions in our organization such types of Program are Disaster Risk Reduction, Disaster Preparedness, Early Recovery Programs, Rehabilitation, over all disaster Management. OFDA has been providing technical and material assistance to the flood affected areas as well as different gov’t and non-gov’t organizations to better cope with the crisis situation, our team has visited many villages of KP Province and has helped a common person who has been affected”.

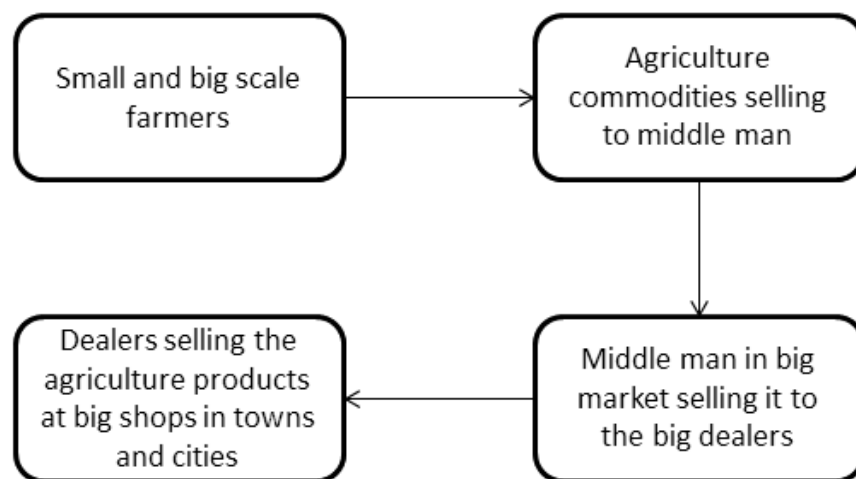
“We have also provided them flour, cooking oil, and gas cylinder so that they can mitigate the consequences of the floods, In addition to that a special package has been given to the farmers who have been affected badly during the flood their land, property, fields and livestock all most all have been taken away by the flood water and along with that almost every person from a household have been caught into Malaria viral disease and some of them have lost their life’s during that time. In order to compensate the farmers our organization have provided seeds for the crops along with the collaboration of FAO we had mostly provided wheat seeds as it’s a major crop in Nowshera. There are different challenges that our organization has been facing in fulfilling our activities such as lack of capacity and required skills of government agencies, Lack of accountability and direct supervision, Bureaucratic hurdles. Our organization is collaborating with other organization. In some affected areas some organizations could also be working. So it is prudent to work with the organizations that already have the required knowledge at hand and are familiar with the socio-economic conditions and cultural factors. In such a case, we may provide monetary support and the other organization may provide material and HR assets to complete the project”.

During the interview he informed me about the crises of the livelihood in the affected areas in the initial days, scarcity of drinkable waters, spread of diseases, lack of housing, lack of proper sanitation, contributing to contagious diseases. As the flood water took away everything and the infrastructure means of communication, were destroyed. Due to the standing water different types of diseases emerge and had spread like a fire in the entire city. Some of the people who had survived during the flood has died due to water born disease, Our organization along with the collaboration of Pakistan military doctors has responded in the area and monitor the situation we supported the Army doctors in terms of making a temporary hospital and by providing medicines boats to help the people of Pakistan in this tragic time. At the present situation the problem that the people are facing right now is of housing and sanitation but a slightly recovery has been made 2010-2011.

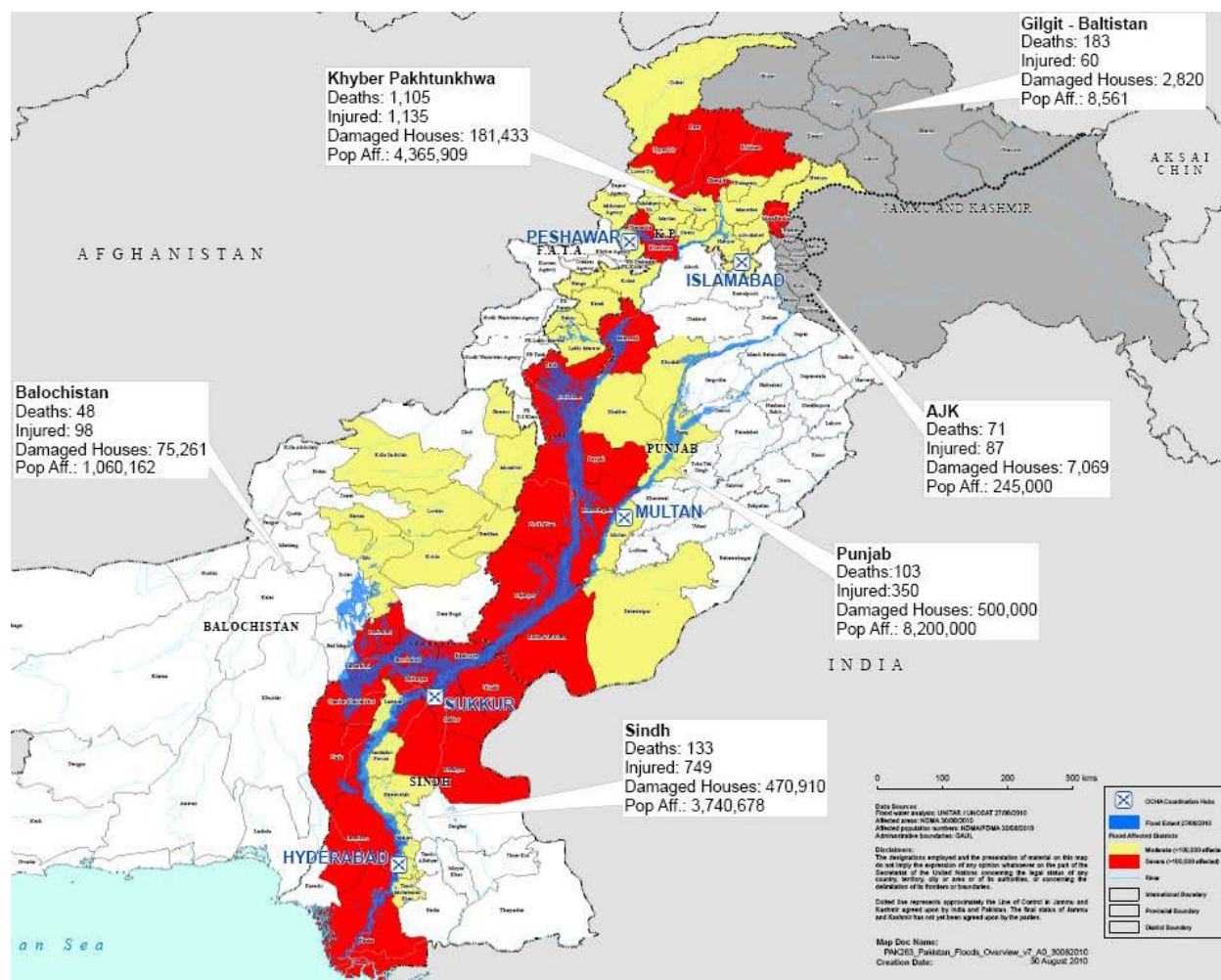
According to the interviewer different type of livelihood activities are needed to for lively hood recovery and for recovery of household such as provision of drinkable water, Provision of housing and sanitation, Provision of employment and employment generation program, provision of psychological support.

4.2. Marketing Channels

Marketing of agriculture commodities is one of the most common problems in Pakistan. Most of the small farmers don't get the right amount for their production because of weak management in marketing channels (Food Agriculture Origination, Report 2005). The middleman uses different marketing channels to sell agriculture commodities on a good price to the client (dealer) who is interested to buy from him, furthermore the client (dealer) used to sell them on local shopkeepers who use to have big shops in towns and cities and they get a good price for that. A local person (consumer) can get whatever he wants on his door step but it's a little bit expensive as it has been processed through different channels. Sometimes there is a conflict between the middle man and the farmer, the middle man complains that whatever he has produce is not of enough good quality to compete in the market so he used to pay less money for that but the farmers have no option as the middle man is the only source for them and he also help them in terms of getting loans. The following chain shows the agriculture produce from the farm to the consumer.

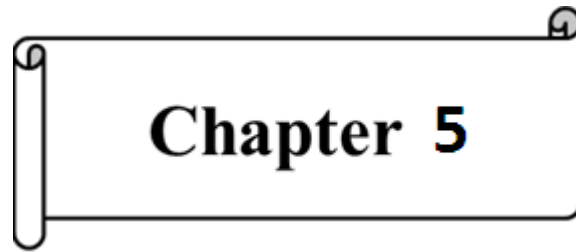


Source: Author



Source: Number of deaths, injuries, damaged homes and affected population by province and region as of August 30, 2010

Source: United Nations Office for the Coordination of Humanitarian Affairs (OCHA)



Chapter 5

5. Summing up:

The study shows economic impact of floods on small scale farmers in terms of agriculture, livestock and poultry. It shows that the flood water has washed away the standing crops, farm inputs and livestock taking away the livelihood of the people.

Farmer A, B and D are small scale farmers and depend on canal system to irrigate their fields. All small scale farmers have suffered during the floods. Now days in Pakistan small scale farmers are decreasing due to fragmentation of land. A big piece of land from the farmer is divided among his children's and then some of children's prefers to do agriculture and some of them sell it. As in case of farmer A the land has been given to him by his father. Most of the farmers A, B and D are not practicing the modern technology they are still using the old methods of cultivation. In order to bring a change in agriculture production and increase the productivity it is necessary that the farmers should be sound financially so that he can utilize the modern technology and practices of farming in order to get fruitful results (Inayat, 2007).

In terms of big farmers who are also affected during the flood have recovered very fast as compare to the small farmers. Due to better connection with the government and also due to some monopolies they were able to get the attention of the government and other stakeholders very fast. Most of the farmers are facing a same problems for instance farmer A, B and D are small scale farmers and their hurdle of progression is lack of funds, lack of investment and health problems and issues where as in terms of middle man he faces a problem in terms of petrol as the price of it increase every week. Due to no incentives from the government side the farmers cannot produce more in the same way no subsidy on fertilizers and urea due to which the production of the crops are also affected.

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Appendix:

Questionnaire for Interview with Representative of Governmental and Non-Governmental Organizations

- General Information
- I am ---- Male ---- Female
- I work in (name of institution)
- My Position is:
- I have been working for this organization for (Period of time)

- What is the vision of your organization?
.....
.....
.....

- What are the core program areas of your organizations?
.....
.....
.....
.....
.....

- From how long your organization is working in Flood affected area ?
.....
.....

.....
.....

- How your organization responded to the crises situations?

.....
.....
.....
.....

- What are your key areas of interventions in the flood affected area?

.....
.....
.....
.....

- How your organization is providing livelihood assistance to the affected people?

.....
.....
.....

- What are the key livelihood activities your organization has implemented so far?

.....
.....
.....

- How these activities are implemented?

.....
.....
.....

- What are the challenges your organizations has faced in implementing these activities?

.....
.....
.....

- Is there any collaboration of your organization with other organizations? If yes,

.....
.....
.....

- What is the form of this collaboration?

.....
.....
.....

- In your point of view what were the key livelihoods issues the affected people faced in initial days of crises?

.....
.....
.....

- In your point of view what are the key livelihoods issues the affected people facing now?

.....
.....
.....

- In your point of view what types of livelihoods activities are needed for livelihood recovery of the different people/households?

QUESTIONNAIRE FOR HOUSEHOLD INTERVIEW

Basic Information

- Did your household displaced during the flood?
.....
- Where your household stayed during flood?
.....
- When did your household returned to the village?
.....

Income Sources and Assets

- What were the main income sources of your household before the flood?
.....
.....
- What are the main income sources of your household now?
.....
.....
- What were the main assets your household possessed before the crises?
.....
.....
.....

Impact of Floods on Household Assets

- What are the main damages your household suffered during the flood?
.....
.....
.....

Land and Agricultural Production

- How many hectors of land do you have for agriculture production?
.....
.....

- Which major crops you produce on your land before the flood?
.....
.....

- Are you doing farming alone or you get help from others?
.....

- Your farm land is irrigated or rain fed?
.....
.....

- What are the main crops you cultivate now?
.....

Livestock

- Do your household own livestock?
.....

- Did your household own livestock before the flood?
.....

- Did your household forced to sell the livestock to meet the basic needs during the flood?
.....

Social Network and Connections

- a) Do you have relatives in the village?
- b) Do you help each other with the farm and/or other work?

.....

- c) Do you give or receive cash to/from these relatives?

.....

- d) Did you help each other during the flood? If yes, how?

.....

- b) Do you have relatives in other areas (including urban) not directly affected in the flood? If yes:

.....

- Did you help each other before the crises? If yes: how and why?

.....

- What is the nature of your household interaction with other households in your village?

Links with Local governance system

- What is the local governance system in your village?

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- Is there any traditional leadership in your village?

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- Is there any direct connection of your household with the government or political party? If yes, please explain?

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- Did you get any support from government if yes? Please explain

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- If no, why?

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- Did you get any assistance from NGOs especially for your household livelihood? If yes, Please explain.

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- If no, Why?

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- What is your overall perception about the role of NGOs in providing assistance especially for household livelihood?

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