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The Flood of 2022 and Its Economic Impacts on the District Kamber-Shahdadkot Kamber, Sindh, Pakistan

Shahzado

Lecturer, Quaid-e-Azam Rangers School and College North Nazimabad, Karachi

shahzadosoli123@gmail.com

ABSTRACT

The flood of 2022 was one of the most destructive disasters in the history of Sindh. This research study examines the economic impacts of this flood on the district Kamber-Shahdadkot Kamber. Using a qualitative method, the study analyzes government reports, published literature, and interviews with affected residents. The findings show that the flood caused severe damage to agriculture, irrigation systems, houses, livestock, power supply, and transport networks. Rice crops were almost completely destroyed, thousands of kutcha and pakka houses collapsed, and many people lost their jobs and sources of income. The destruction of roads and bridges increased transportation costs and created shortages of food and daily items, leading to high inflation in the district. Although the Sindh government and NGOs provided some relief in the form of tents, food, cash assistance, and dewatering pumps, most residents remained dissatisfied with the government's response. Overall, the study concludes that the economic impact of the 2022 flood on Kamber-Shahdadkot Kamber was extremely high and long-lasting, worsening poverty, unemployment, and food insecurity in the district.

Keywords: Flood of 2022, Economic Impacts, Kamber-Shahdadkot Kamber, Sindh.

Introduction

Earlier to the floods of 2022, Pakistan was already dealing with economic issues, such as a fragile balance of payments and an expanding current account deficit. The nation's economic predicament was worsened by the COVID-19 pandemic's effects and interruptions in international supply lines.¹ So for that under these condition Sindh is an important part of Pakistan's economy. Earlier to the flood of 2022 Sindh was contributing 27% of the nation's Gross Domestic Product (GDP) and 62 percent of Sindh's agricultural GDP comes from the cattle sector. The agriculture industry employed 70% of the workforce, which is also a main basis of income for the province. However, 37% of Sindh's rural population falls below the poverty line, and in certain places that have experienced flooding, the percentage is significantly higher, ranging from 40% to 60%. Access to health, sanitation, water, and education is another issue that these communities face.²

Economic Situation of Sindh Before and After the Flood of 2022

The flood of 2022 severely affected the economy and food security of Sindh, which destroyed 428,000 livestock and 4.8 million acres of crops³. According to the 2022 PDNA study, the national poverty rate would rise by 3.7 to 4.0 percentage points, putting over 9.1 million

¹ Shahroo Malik. "The Economic Costs of Pakistan's Floods," *South Asian Voices*, 16 September, 2022.

² Sumaira Feroz. "Assessing Socioeconomic Impact of 2022 Floods in Sindh," *Global Strategic Pulse* 1, no.1, (2024).

³ Sumaira Feroz. "Assessing Socioeconomic"

individuals below the poverty line.⁴ Besides, floods in Sindh destroyed 23 districts, hundreds of homes and over 700 people have been hurt at least 239 of them have died across the province. Due to the extensive destruction of houses, almost half a million people are currently residing in relief camps around the nation.

Finally, reports have shown that over four out of five Sindh crops roughly and one-third of Pakistan's entire cotton crop have been destroyed. Pakistan's economy is inevitably going to suffer because the agricultural sector accounts for a quarter of the country's GDP, which would worsen the already dire situation. Inflation reached 27.3% in August as a result of declining foreign exchange reserves, which put Pakistan in a state of economic catastrophe, with an estimated ten billion dollars lost.⁵

Literature Review

Primarily study correlated literature was studied for concepts and for the understanding of the topic, flood related research papers, articles, books, reports and journals were extracted and analyzed. Government based publications such as NDMA, PDMA-Sindh, were dig out and examined to address the needs of the study. Numerous studies have studied for the purpose of floods impact on human death, live-stock, property, infrastructures, crops, villages, employment, inflation rate, and houses as well flood affected communities and areas. A brief description of flood related studies in the world and Pakistan has given below to show the contrast and comparison of this study with other studies.

The meaningful book titled, *“Extreme Events: A Physical Reconstruction and Risk Assessment”* by Jonathan Nott (2006). In this book writer has explained the general causes of flooding in the world and divided flood causes into two types, natural and human. Human causes include massive urbanization, vegetation, and the removal of trees for various reasons. The environment, particularly rainfall, is a common source of flooding. Prolonged perception is the most frequent cause of floods in Globe. It is common to associate certain rainfall occurrences with number of days, weeks, or months. Human activity affects river catchments and modifies flood behavior. In particular, changes in land use directly affect the flood levels and patterns. Increased sedimentation rates are caused by excessive deforestation, which frequently results in reduced canal capacity. Floods are regarded as the most dangerous because they cause more damage to life than any other natural catastrophe. From 1986 to 1995, 31% of global economic losses and 55% of fatalities were flooded when in dealing with natural disasters.⁶

Informational book titled as, *“Maha Bood 2010: Jeke Sindh San Thiyo.”*(Super Flood of 2010: What Happened With Sindh?), by Aziz Ranjhani (2011). In this book author describes his own experience and illustrates how Sindh has suffered as a result of the 2010 mega floods. However, due to the lack of other options and the lack of local and regional stakeholder rehabilitation, a sort of "drought" developed in several Sindh regions, including Kashmore, Thul, Jacobabad, and Shahdadkot. As a result, the local population moved to other cities to escape their lives. Additionally, he drew attention to past flood history and made a forecast based on his personal observations that significant social and economic losses occurred during the mega flood.⁷

⁴ Government of Pakistan, *“PakistanFloods2022: Post Disaster Needs Assessment.”* The Government of Pakistan, Asian Development Bank, European Union, United Nations Development, (2022)

⁵ Maham Iqbal et al. “The Floods of 2022: Economic and Health Crisis Hits Pakistan”, *Annals of Medicine and Surgery* 84, no.1, (2022):1.

⁶ Jonathan Nott. *Extreme Events: A Physical Reconstruction and Risk Assessment* (United Kingdom: Cambridge University Press, 2006).

⁷ Aziz Ranjhani. *Maha Bod 2010: Jeke Sindh San Thiyo* (Jamshoro: Sindhica Academy, 2011).

The Ph.D. thesis Manuscript titled, *“Impact of Floods on Pakistan: Historical and Socio-Economic Perspective (1970-2010)”* by Syed Izaz Ahmed, (2015). In his thesis, the author has chronologically presented the socio-economic impacts of floods from (1970-2010) in Pakistan, using both quantitative and qualitative schemes for data collection. The author selected random sampling for interviews with the flood victims and selected flood districts. From the province of Sindh he choose four districts named as (Sukkur, Thatta, Shikarpur and Badin). The author neglected the district of Kamber-Shahdadkot Kamber which was also vulnerable to floods. Apart from this, the author has also described the flood management and mitigation efforts of organizations in Pakistan. Finally, the author puts forth recommendations in his thesis for future hazards mitigation.⁸

The article titled as, *“A Review of the Assessment and Mitigation of Floods in Sindh, Pakistan,”* by Asadullah Kazi. In this article, the author has explained riverine floods that mostly affected Sindh and narrated the history of the floods in Sindh. In addition, author has mentioned that Sindh has experienced riverine, flash floods, urban/storm water floods, pluvial floods, and coastal floods. Finally, at the end of this article the author has provided recommendations to lessen the impact of these floods and shed light on participatory management techniques that consider safety, scientific, technological, social, and political aspects in order to reduce and manage the risks of flooding.⁹

The article tilted as, *“The Pakistan Flood of August 2022: Causes and Implications”* by Nanditha. J.S et al, (2023). In this article authors have explored the causes and ramifications of Pakistan's experience with many natural catastrophes caused by the country's harsh weather and heavy precipitation. The reasons and effects of the flood in Pakistan in 2022 have been examined by the authors using observation and climatic forecasts. Authors claim in this article that the core reason of the flood in August 2022 was multiday intense precipitation over wet antecedent soil moisture conditions. Two atmospheric rivers that travelled over southern Pakistan in August were the sources of excessive precipitation. Furthermore, they claimed that all weather patterns are caused by precipitation that starts at the national level and spreads to arid regions.¹⁰

Research Question

What were the economic impacts of the flood of 2022 on district Kamber-Shahdadkot@ Kamber, Sindh, Pakistan?

Research Objective

1. To find out the economic impacts of the flood of 2022 on the district Kamber-Shahdadkot Kamber, Sindh, Pakistan.

Research Methodology

This study has been specified on Kamber-Shahdadkot Kamber, Sindh Pakistan. There are various academic literatures like reports, articles, and books which made a part of the discourse in this research. Besides, the economic impacts of the flood of 2022 has been analyzed. The method of this study is qualitative in nature to acknowledge the question and objective in a good way.

Types of Floods in Sindh

⁸ Syed Izaz Ahmed. *“Impact of Floods on Pakistan: Historical and Socio-Economic Perspective (1970-2010)”* (unpublished Ph.D. thesis, Islamia University Bahawalpur, 2015).

⁹ Asadullah Kazi. “A Review of”

¹⁰ J.S Nanditha et al. “The Pakistan Flood of August 2022: Causes and Implications”, *Earth's Future*.11, no. 3, (2023).

Floods can take many different forms, depending on the local climate, water supply, and geography. Such as Urban/storm water, these floods are brought on by an excessive amount of precipitation, which is more than the region's capability for drainage. There are several instances of this types of flooding in Sindh. On the other hand, the most recent incidence happened in 2011, and the Sindhi print and electronic media reported it extensively.

In addition, there is significant damage to the pediment and piedmont areas of the upper Sindh due to torrential rainfall generating flash floods and flash floods are produced when there is an excessive amount of rainfall in a brief period of time. After intense rainfall, these floods are typically characterized by roaring streams that tear through mountain valleys, city streets, and riverbeds, sweeping away everything in their path.

Moreover, there were coastal floods in Shah Bunder, Badin, Karachi, and Thatta. Over the last 50 years, many cyclones have struck the coastal areas of Sindh, including those that occurred in 1964, 1993, 1999, 2003, 2004, 2007, 2009, and 2010.¹¹ In Sindh, Balochistan, and southern Punjab, the combined effects of flash, urban, and riverine floods had a significant impact. Flash floods brought on by heavy rainfall in the Kirthar and Suleman Range mountains, which border Sindh and Balochistan, also impacted the Sindh Province.¹² Torrential floods leave virtually little time for response, whereas riverine floods are predictable and provide ample time. Torrential floods have a severe impact because they are less frequent and last longer, however, they are extremely intense. These floods often occur during the July and August monsoon season, when there is a lot of rainfall in the Balochistan's catchment areas. The Khirthar Hills from the western border between Sindh and Balochistan. Mula, Boolan, Khanji, Mazarani, Dillan, Buri, Salari, Shole, Gaaj, Angai, Naing, and Bandani are among the fierce streams that transport rushing waters from the high Khirthar elevations to Sindh's Kachhi plains.¹³

Causes of Floods

In Pakistan, the primary source of floods is intense, and rigorous rainfall in the river catchments. This is occasionally enhanced by snowmelt flow, and usually results in river flooding during the monsoon season. In Sindh there are multiple causes of floods such as flash floods hit from the Kirthar range, cyclones from Karachi or Kati bander, and riverine floods due to the Indus River flows over a ridge, with the surrounding land often being lower than the riverbed. Water that has spilled over the bunds does not return. Thus, escaped water damages larger regions more severely and continues to do so long after the flood peak have passed.¹⁴ In addition, riverine floods take too long to develop, giving people sufficient time to prepare and leave. Flash floods, on the other hand, rarely give advance notice because they occur swiftly in hilly areas and can be quite dangerous because they can sweep away anything that crosses the river.¹⁵

The Flood of 2022 and Irrigation Infrastructure

The report of the government of Pakistan shows that the Irrigation water supply system's productive sectors 59 (dams and canals) have together sustained 41% of the damage, which will have a negative impact on agricultural output in the upcoming production seasons if left unchecked. Low wheat output this year is predicted, contingent on the recovery of irrigation

¹¹ Abdullah Kazi. "A Review of the Assessment and Mitigation of Floods in Sindh," *Natural Hazards* 70, no.1, (2014).

¹² PDMA- Sindh. "Flood 2022 in Sindh from June 20, 2022 to January 31, 2023," Government of Pakistan, (2022).

¹³ Naseer Memon, *Malevolent Floods of Pakistan 2010-2012*, (Karachi: Strengthening Participatory Organization, 2013), 10.

¹⁴ Federal Flood Commission. "Flood Management in Pakistan," Ministry of Water and Power, (2009).

¹⁵ Syed Muzzamil Hussain Shah et al. "A review of the Flood Hazard and Risk Management in the South Asian Region Particularly Pakistan," *Scientific African* 10, (2020): 2.

and drainage systems, particularly in Sindh. This might result in food shortages and elevated food commodity prices.

Moreover, Crop output would be significantly reduced in Sindh due to poor drainage. Irrigation services in the majority of Balochistan's dry regions are being disrupted by damage to irrigation and water storage installations. The agricultural industry is responsible for crop losses brought on by flooding, siltation, waterlogging, and insufficient irrigation resources. In addition, the total loss and damage to the Pakistan's irrigation infrastructure was 153 billion rupees (US\$711 million).¹⁶

Finally, an unpublished report of the Deputy Commissioner of district Kamber- Shahdadkot Kamber titled as *"Visit of honorable Chief Minister of Sindh, Thursday 15th December 2022"* (2022) shows the destruction of the irrigation system in the district Kamber-Shahdadkot Kamber, which was impacted by the flood of 2022. In this report DC explains about the cuts and breaches to irrigation infrastructure in district Kamber-Shahdadkot Kamber. He explained that the number of cuts on the Saifullah Magsi branch division was 114, and 175 on the Shahdadkot irrigation division a part from this there were some other cuts on other divisions. Further he stated that the total number of cuts and breaches in irrigation divisions in the district Kamber-Shahdadkot Kamber was 457, which was caused by the flood of 2022.¹⁷

The Flood of 2022 and Impacts on Agriculture Sector

Sindh Province produces 31% of the country's sugarcane, 23% of its cotton, and 42% of its rice. The country faces the risk of an unprecedented food security catastrophe as a consequence of the flood of 2022 in Pakistan, which inflicted significant damage to infrastructure, livestock, and agricultural harvests, including storage facilities holding millions of tons of grain.¹⁸ Besides, the flood of 2022 in Pakistan impacted around the four-fifths of Sindh's total crops, or about one-third of Pakistan's total cotton harvest. The problem would worsen as Pakistan's economy, which is already facing difficulties, would unavoidably suffer because the agricultural sector makes up 25% of its GDP.¹⁹

Moreover, the flood of 2022 severely impacted the rice crops area as 1.9 million tons of rice or 80% of Sindh's expected total rice production have been destroyed.²⁰ The predicted direct losses to livestock and crop output are just a small portion of the agricultural economy's losses. Economic losses will probably be exacerbated by direct damage and losses to agricultural equipment and tools, farm and rural infrastructure, and trees. The deeper and longer-lasting effects on Pakistan's agriculture are probably in store for the indirect costs of draining and land rehabilitation, higher transportation costs brought on by damaged roads and infrastructure, losses in subsequent crop cycles as a result of water logging and sowing delays, and government rehabilitation and compensation assistance.²¹

Furthermore, regarding the impacts on agriculture lands or crops in district Kamber-Shahdadkot Kamber a question was asked from the residents of district that "What type of agricultural lands were damaged, and how costly was it?" Ghulam Qadir resident of village Ghulam Hussain Magsi, Taluka Qubo Saeed Khan told that *"I was cultivating 55 acres of rice crops lands, which was washed away by the flood of 2022 and it was 15, 0000 rupees costly"*

¹⁶ Government of Pakistan, *"Pakistan Floods 2022"*

¹⁷ Deputy Commissioner of District Kamber- Shahdadkot@Kamber. *"Visit of honorable..."*

¹⁸ Faisal Mueen Qamer et al. "The 2022 Pakistan Floods Assessment of Crop Losses in Sindh Province Using Satellite Data", *International Centre for Integrated Mountain Development*, (2022).

¹⁹ Maham Iqbal et al. *"The floods of 2022"* 1.

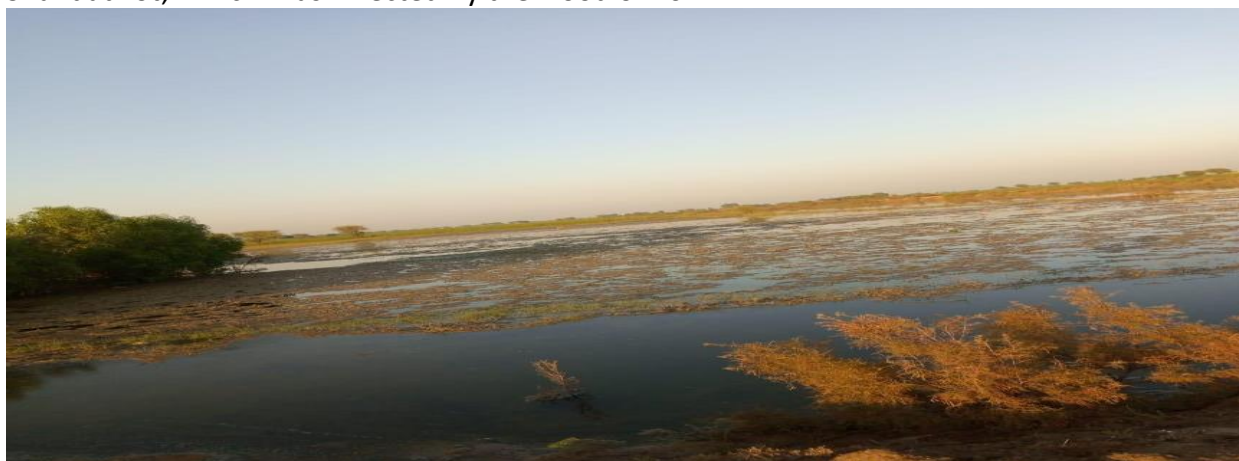
²⁰ Faisal Mueen Qamer et al. "The 2022 Pakistan"

²¹ Faisal Mueen Qamer et al, "The 2022 Pakistan"

the current market rate.”²² Abdul Rahman respondent of the same taluka told that “I was cultivating 20 acres of rice crops and the flood washed away our every bit of rice from us and we were seeing that moment, at least 4 lack rupees I lost in this flood”.²³

Finally, Respondents of the taluka Warah, Sujawal Junejo and Shahdadtal told that, first, Noshier Ahmed informed that “I was cultivating 25 acres of rice crops in those days and flood affected our all crops and gave me loss of 7 lack rupees”.²⁴ Second, Abdul Hameed told that “I was cultivating 15 acres of rice crops in that time and the rains damaged it badly and the flood washed away the crops from me, gave me the loss of 5 lack rupees and also the standing water affected our next season wheat crops as the land was not dried properly”.²⁵ Third, Mir Muhammad Hussain Magsi told that “I was cultivating 50 acres of rice crops in that time, which was badly affected by the flood, it cost us 15 lack rupees and the standing water in village also affected our next crops as well as. As the land was not dried on time and we were unable to crop for the next seasons”.²⁶

Figure 1: Shows the Agricultural Land in the Village Of Aatibar Khan Chandio, Taluka Shahdadtal, Which Was Affected By the Flood of 2022.



Source: Gul Jan an Interviewee of Taluka Shahdadtal

The Flood of 2022 and Power Sector

The flood of 2022 mostly affected the distribution system and hydroelectric power plants in the power industry. The majority of the impacted population in Sindh, Balochistan, Southern Punjab, and KP experienced power outages as a result of distribution network disruptions. According to the government of Pakistan the overall estimated damages are 17.4 billion rupees, or USD 81 million.²⁷ Besides, the district Kamber-Shahdadtal Kamber was affected from the flood of 2022 in such a way that like the cut off the electric city for long hours in district, which created hurdles for peoples in district.

The Flood of 2022 and Reasons for High Economic Cost in District

First, the loss of over 129 bridges, making it more difficult to transport fruits and vegetables to markets, has worsen the food crisis and price. These events are increasing the risk of starvation for flood victims.²⁸ Second, another reason of high economic cost in district Kamber-

²² Ghulam Qadir, interview by the author, October 18, 2024.

²³ Abdul Rahman, interview by the author, October 18, 2024.

²⁴ Noshier Ahmed, interview by the author, October 20, 2024.

²⁵ Abdul Hameed, interview by the author, October 17, 2024.

²⁶ Mir Muhammad Hussain Magsi, interview by the author, October 18, 2024.

²⁷ Government of Pakistan. “Pakistan Floods 2022.....”

²⁸ Maham Iqbal et al. “The Floods of 2022”

Shahdadt Kamber was the man made inflation as the people of district told that during the rains and after that the prices of essential items was increased and authorities was unable to control it . As the Plastic shopper was 50 rupees meter before the rains it became 250 rupees meter during the rains in some cities of district it reached at 500 rupees meter. Further the district receives some essential items from the Balochistan province and during those days the roads were washed away by the flood and which leads to hike in the prices of essential items.

The Flood of 2022 and Damages to the Houses and Villages

In Pakistan during the flood of 2022 many homes were destroyed. As over 1.27 million homes were partially and over 780,000 homes were completely destroyed in the 94 affected disasters. Most affected homes were in rural areas, and kutcha homes sustained more damage than pukka homes, with 83 percent of all home losses, Sindh's housing stock was the most severely affected province. In addition to causing a large loss of household goods, the destruction of dwellings has seriously disrupted family life. Large-scale relocation brought on by housing losses came with hazards, particularly health hazards. The total damage was 1,200 billion rupees (US\$5,586 million) and Loss was 137 billion rupees (US\$636 million) in Pakistan.²⁹

Moreover, an unpublished report of the Deputy Commissioner of district Kamber-Shahdadt Kamber titled as *Pakistan Flood 2022: Damaged/Assessment caused during monsoon rain 2022, DC office (2022)*. In this report DC explains that the total number of Pakka houses in district Kamber-Shahdadt Kamber were 99153 among these houses flood damaged 18253 houses fully and 13324 houses partially. Further in this report DC shows that the total number of Kutcha Houses in the district were 426936 and flood damaged 102221 houses fully and 74359 houses partially. Finally this report shows that among the 52 Union Councils of district 52 were severely affected by the flood.³⁰

Furthermore, a question was asked from the resident of the district Kamber-Shahdadt Kamber about the damages to the houses and villages in the district in way that "How did the flood and rains damage your home, and what type of home were you living in? Abdul Ghaffar resident of the village Habibullah Khan, taluka Warah told that "*we were living in kutcha houses and the rains and flood affected it fully and destroyed our homes*".³¹ Another resident of the same taluka Abdul Waheed told that "*we were living in the kutcha houses and continues rains affected our home and destroyed it fully*".³² Residents of the taluka Sujawal, Shahdadt Kamber and Kamber Ali told that first, Iskandar Ali told that "*We were living in the Kutcha houses and some of our rooms were made of semi Pakka rooms, it was partially damaged and the kutcha houses were fully damaged*".³³ Second, Waheed Ali told that "*We were living in Kutcha houses due to continue rains of 2 to 3 months, which partially damaged our house and we were in worry that may be our house was collapsed fully but God saved it. In this condition we need 1 to 2 lacks for rehabilitation*".³⁴ Third, Muhammad Ali told that "*we were living in the Pakka house and the rains damaged our rooms fully*".³⁵

Finally, a question was asked from the resident of the district Kamber-Shahdadt Kamber about the villages affected by the flood of 2022 in district that "How many villages in your area

²⁹ Government of Pakistan, "*Pakistan Floods 2022*"

³⁰ Deputy Commissioner Kamber-Shahdadt Kamber. "*Pakistan Flood 2022: Damaged/Assessment caused during Monsoon Rains 2022*, DC office, (2022).

³¹ Abdul Ghaffar, interview by the author, October 20, 2024.

³² Abdul Waheed, interview by the author, October 20, 2024.

³³ Iskandar Ali, interview by the author, October 17, 2024.

³⁴ Waheed Ali, interview by the author, October 11, 2024.

³⁵ Muhammad Ali, interview by the author, October 24, 2024.

were destroyed by the flood of 2022?” For this question 35 respondents participated and all of them answered that all the villages nearby were impacted by the flood in the district.

Figure 2: Shows the damages of infrastructure caused by the Flood Of 2022



Source: Author

The Flood of 2022 and Employment

Floods have long been the major cause of unemployment, when a flood occur, locals quit their occupations to focus on protecting their families and possessions from flood waters. During a flood, the afflicted town becomes unemployed. Approximately 68 percent of Pakistan's population lives in its rural areas, which have historically been severely damaged by floods. Historically, these areas have been the country's most flood-prone locations, 45 percent of the nation's workforce are employed in the agricultural industry alone.³⁶

Moreover, in every province, floods have destroyed livelihoods and lives. According to preliminary reports of NDMA, the national poverty rate may rise by 3.7 to 4.0 percentage points, forcing 8.4 to 9.1 million people into poverty, if immediate relief and recovery efforts are not made to assist the deprived. Due to the impact's severity and length, 4.3 million workers in all provinces have experienced varying income losses. Also, 130 billion rupees (US\$607 million) was projected to have been lost in Pakistan in these three sectors: jobs, livelihoods, and social protection.³⁷

Furthermore, a question was asked regarding this problem from the residents of the district Kamber-Shahdadtaluka Kamber that “Did the flood affect your employment?” A respondent of taluka Qubo Saeed Khan and resident of the Ghulam Hussain Magsi told that “Our employment

³⁶ Syed Izaz Ahmed, “Impact of Floods on Pakistan: Historical and Socio-Economic Perspective (1970-2010)” (Ph.D. diss, Islamia University Bahawalpur, Bahawalpur, 2015), 97.

³⁷ Government of Pakistan, “Pakistan Floods 2022”

was on crops as they washed away means our employment was washed away".³⁸ Another resident of the same taluka, Abdul Kareem told that *"being a shopkeeper of Shoes sales, during the rains and after that the coming of customers became as limited. As the area is totally depends upon crops, which was washed away by flood and people was unable to purchase things*".³⁹ Respondents of the Taluka Miro Khan Wazir Ali told that *"As my employment depends upon the vehicle during the rains i was stuck in the home and the destruction of roads also bound us into home. We were very helpless during the rains and flood time there was nothing with us to spend our days*".⁴⁰ And Abdul Rashid told that *"I was doing my job in a saloon, during the rains and flood the customers became limited due to flood and after that I spent 2 to 3 months on my shop the ratio of customers was 2 to 3 in a day as compared to the good times there was 10 to 15 customers in a day*".⁴¹

Finally, Respondents from the taluka Kamber Ali, Shahdadtal and Sujawal Junejo told that: first, Imran Ali told that *"As a daily wage our job depends upon the market and the customers. As the flood of 2022 destroyed everything and the make the people vulnerable to purchase anything*".⁴² Second, Waheed Ali told that *"Our everything was crops, when they ruined our employment was ruined*".⁴³ Third, Abdul Hameed told that *"As a Truck driver my employment was attached with transport, during the rains the transportation was closed due to the bad weather and the cuts in roads and their destruction, which leads to park my vehicle in home then I was unemployed during 3 months of rains and flood*".⁴⁴

The Flood of 2022 and Impacts on Transport and Communication Infrastructure

The significant destruction of roads and transport infrastructure made it difficult to move about, support livelihoods, trade, and commerce, and to access essential services such as healthcare and education.⁴⁵ Besides, the report of the NDMA indicates that the floods have damaged 3,127 kilometers of railway track (approximately 40 percent of all in-service railroads) and 8,330 kilometers of roads (roughly 3.2 percent of all in-service highways) to varying degrees. Sindh, Balochistan, and KP are the provinces that have been the most devastated.⁴⁶

Moreover, regarding this issue a similar question was asked from the residents of the district Kamber-Shahdadtal Kamber that *"How did the floods affect transportation and communication (roads, bridges), and how did it affect you?"*

In reply the residents of taluka Qubo Saeed Khan Abdul Kareem and Ghulam Qadir told that: first, Abdul Kareem told that *"due to the destruction of the roads and collapsed of bridges which impacted us in the form of increase in the price of fairs, and shortage of vehicle to move here and there*".⁴⁷ And Ghulam Qadir told that *"The main road which is CPEC road near by us affected badly from the flood than what I say about the other local roads. This taluka was badly affected from the flood*".⁴⁸ The same question was asked from the residents of the taluka Miro Khan and Kamber Ali and they told that: First Wazir Ali told that *"Due to the destruction of the roads and some where the cuts of roads gave us so many sufferings in the form of the fairs*

³⁸ Ghulam Qadir, interview by the author, October 18, 2024.

³⁹ Abdul Kareem, interview by the author, October 18, 2024.

⁴⁰ Wazir Ali, interview by the author, October 19, 2024.

⁴¹ Abdul Rasheed, interview by the author October 19, 2024.

⁴² Imran Ali, interview by the author, October 20, 2024.

⁴³ Waheed Ali, interview by the author, October 11, 2024.

⁴⁴ Abdul Hameed, interview by the author, October 17, 2024.

⁴⁵ Sumaira Feroz, "Assessing Socioeconomic"

⁴⁶ Government of Pakistan, "Pakistan Floods 2022"

⁴⁷ Abdul Kareem, interview by the author, October 18, 2024.

⁴⁸ Ghulam Qadir, interview by the author, October 18, 2024

increased of transportation.”⁴⁹ and second Farooq Ali told that “the road which connects our village with city was given 3 cuts to give water natural ways and that cuts remand for long time and we were need to go city so for that we used to travel on foot towards city and buy things for home.”⁵⁰ Third, Abdul Razzaq Shah told that “due to the damage of some main roads the price of fairs increased as the vehicle was to travel another route to reach us in the bazar.”⁵¹ Fourth, Muhammad Ali told that “due to the destruction of the roads the price of the fairs increased in our village.”⁵²

Finally, residents of the taluka Shahdadtal and Warah told that: Waheed Ali told that “Roads are means of communication when flood struck the roads they become vulnerable. We were affected from the destruction of the roads. As the fairs of vehicles increased.”⁵³ And Muhammad Arif told that “due to the rains in the taluka as well in Pakistan. Many distractions occurs among which roads and bridges are damaged. So for that the prices of food items increased and the transport was stuck in homes.”⁵⁴ Resident of the taluka Warah, Noshier Ahmed told that “Good roads make comfortable the life of citizens but during the rains and flood of 2022 the roads of taluka was destroyed due to the cuts in roads to give natural ways to water.”⁵⁵

Figure 3: A Road In Taluka Miro Khan Was Damaged By The Flood Of 2022 But It Is Not Repaired Yet.



Source: Author

The Flood of 2022 and Inflation

Inflation in Pakistan was increased due to the flood of 2022. As in August 2022, significant Character Per Inch inflation increased by 27.3 percent year over year from 24.9 percent in July, because of flood disruptions, gasoline price increases, and tariff changes on power pricing. The inflation of energy prices skyrocketed to 67.8 percent in rural areas and 80.7 percent in metropolitan areas. Overall and food inflation hit all-time highs; in August 2022, overall inflation was 13.8 percent in urban areas and 16.5 percent in rural regions, while food inflation was almost 30 percent in both. Similarly, after rising 38.5 percent in July, the wholesale pricing index (WPI) jumped 41.2 percent year over year in August, mostly due to shortages caused by

⁴⁹ Wazir Ali, interview by the author, October 19, 2024.

⁵⁰ Farooq Ali, interview by the author, October 19, 2024.

⁵¹ Abdul Razzaq Shah, interview by the author, October 20, 2024.

⁵² Muhammad Ali, interview by the author, October 24, 2024.

⁵³ Waheed Ali, interview by the author, October 11, 2024.

⁵⁴ Muhammad Arif, interview by the author, October, 12, 2024.

⁵⁵ Noshier Ahmed, interview by the author, October, 20, 2024.

the floods and transportation challenges.⁵⁶ Moreover, August saw a 27.3% increase in inflation due to dwindling foreign exchange reserves. With an estimated ten billion dollars lost, Pakistan is currently experiencing an economic crisis. Livestock is the prime basis of food and livelihood for the majority of individuals in the impacted areas.⁵⁷

Furthermore, regarding this problem a similar question was asked from the residents of the district Kamber-Shahdadtal Kamber that "What was the economic cost of the flood, and did the food prices hike?" In reply the residents of taluka Warah, Nosher Ahmed told that *"the prices of belongings was increased during the rains time everything was double and the inflation is still affecting us."*⁵⁸ And Ali Akbar told that *"In the time of rains the prices of foods increased as the wheat flour was became 200 rupees per kg in the village and the plastic which was earlier 50 rupees meter it becomes 250 rupees meter in the time of rains"*.⁵⁹

Finally, the resident of taluka Miro Khan Wazir Ali told that *"During the rains the price of food items increases as the food was short in markets, which leads to the increase in food items as the potato was 80 rupees 1 kg before it reaches 150 rupees kg, plastic was 70 to 80 rupees meter in normal days it reached 200 to 300 rupees meter"*.⁶⁰

Response of Sindh Government and Non-Governmental Organizations

The flood of 2022 was a unique calamity in the Sindh province history. Rain, riverine floods, and flash floods from highland torrents have contributed to this destruction. The Provincial Disaster Management Authority faced difficulties in organizing and overseeing such a massive response, as 23 of the province's 30 districts were impacted simultaneously. The lack of necessary relief supplies, destroyed roads and infrastructure, the state of law and order, and, to some extent, instances of aid snatching made matters more difficult. Nevertheless, despite these challenges. Shelters provided by the Sindh government were tents 941,538, Tarpaulin Sheets 622,070, Mosquito Nets 3,976,600, Animal Mosquito Nets 91,654, food and security, 2,553,421 Ration Bags 251,606 Cooked Food Water(Liters), Medicines (Tons) 812,773, 100 Household, 96,469, Sleeping Mats 1,837,211, Blankets 112,075, Machinery, 113 Truck Mounted Dewatering Pump Machinery, 175 Small Dewatering Pumps and 28 RO Plants.⁶¹

Moreover, The Benazir Income Support Program (BISP) was introduced in 2008 as the main social program of the Government of Pakistan. It is the largest and most organized social protection program ever introduced in Pakistan.⁶² Under the Benazir Income Support Program (BISP), 35 billion rupees (about US\$173 million) has been set aside nationwide to assist those impacted by flooding. Because to the recent and anticipated rainfall in Sindh province, this is anticipated to rise to more over 100 billion rupees (about US\$460 million). According to the National Socio-Economic Registry (NSER), the BISP plans to provide immediate monetary assistance of 25,000 rupees (US\$115) to about 4.6 million of the most vulnerable households in the identified impacted districts throughout Pakistan.

⁵⁶ The World Bank, "Pakistan Development Update Inflation and the Poor October 2022", World Bank Group, (2022).

⁵⁷ Maham Iqbal et al, "The floods of 2022"1.

⁵⁸ Nosher Ahmed, interview by the author, October 20, 2024.

⁵⁹ Ali Akbar, interview by the author, October 20, 2024.

⁶⁰ Wazir Ali, interview by the author, October 19, 2024.

⁶¹ Provincial Disaster Management Authority - Sindh (PDMA - Sindh), "Flood 2022 in Sindh from June 20, 2022 to March 31, 2023" Government of Sindh, (2023).

⁶² Iftikhar Cheema et al. "Benazir Income Support Programme Evaluation report", Oxford Policy Management, (2020)

Additionally, the government is giving 1 million rupees (US\$4,615) in ex-gratia compensation to the surviving family members of those died in the floods 250,000 rupees (US\$1,154) for housing damage and injuries and 500,000 rupees (US\$2,308) for homes that were destroyed. Besides, 5 billion rupees (about US\$23 million) that the government gave to NDMA, a relief fund has been set up so that people may contribute to flood relief activities.⁶³

Finally, regarding the satisfaction from the concerned authorities a question was asked from the resident of the district Kamber-Shahdadt Kot Kamber that "How satisfied were you with the government's response to the flood?" In response among the 35 participants 33 were not satisfied with the response of government at all as they claimed that compared to suffering the relief of government was insufficient and the 2 respondents were slightly satisfied with the response of government. However, majority of the respondents were satisfied from the response of NGOs. As resident of taluka Qubo Saeed Khan Abdul Kareem informed about the satisfaction that *"World Food Organization (WFO) gave us food during the rains and the Sindh Rural Support Organization (SRSO) surveyed our homes after the flood."*⁶⁴ And residents of Warah taluka Noshier told that *"United Nations International Children Education Fund (UNICEF) was provided us tents, ration bags and facility of fresh water for drinking during the time of flood."*⁶⁵ And Ali Akbar told that *"the Human Appeal gave us 4 times 40 kg of wheat flour and 12000 rupees cash. Apart from this after the rains the Human Appeal started a work to make a road for us which was to connect city and in this work he mobilized the villagers and paid them on the daily basis. Which was a job for villagers and a help for them in the rainy days"*.⁶⁶

Recommendations

1. Improve Flood Protection Infrastructure

The government should repair and strengthen embankments, canals, drainage systems, and flood protection walls in Kamber-Shahdadt Kot. Regular monitoring must be done before the monsoon season to prevent breaches and cuts.

2. Early Warning System

A strong and reliable early warning system should be developed. Local people must receive timely messages through mobile phones, FM radio, and social media so they can evacuate before flooding starts.

3. Strengthen Disaster Management Departments

The District Disaster Management Authority (DDMA) should be given more staff, training, and resources. Emergency response teams need proper equipment such as boats, life jackets, and rescue tools.

4. Reconstruction of Roads and Irrigation Channels

Damaged roads, bridges, canals, and watercourses should be rebuilt with better quality materials. This will support agriculture, reduce travel costs, and improve market access.

5. Support Farmers for Recovery

The government should provide farmers with seeds, fertilizers, machinery, and financial support. Interest-free loans can help farmers restart agricultural activities after the flood.

6. Livestock Protection Programs

⁶³ United Nations Office, *"Pakistan 2022 Floods Response Plan: 01 Sep 2022 - 28 Feb 2023"*, United Nations Office for the Coordination of Humanitarian Affairs (2022).

⁶⁴ Abdul Kareem, interview by the author, October 18, 2024.

⁶⁵ Noshier Ahmed, interview by the author, October 20, 2024.

⁶⁶ Ali Akbar, interview by the author, October 20, 2024.

Veterinary care, vaccination drives, and shelters for animals must be provided during emergencies. Compensation should also be given to families who lost livestock.

7. Transparent and Fair Relief Distribution

Relief items such as tents, ration bags, and cash assistance should be distributed fairly. A proper registration system using CNIC numbers can reduce corruption and ensure that help reaches the most affected families.

8. Build Flood-Resistant Houses

The government and NGOs should help people build stronger houses using flood-resistant materials. Training for local masons can also improve the quality of construction.

9. Awareness and Training Programs

Community training on disaster preparedness should be arranged in villages and schools. People should be taught how to protect documents, livestock, and essential items during floods.

10. Long-Term Climate Adaptation planning

Since climate change will increase floods in the future, the government must prepare long-term plans, including water management, land use planning, and environment-friendly policies.

Conclusion

The flood of 2022 had deep and long-term economic impacts on the district Kamber-Shahdadt Kot Kamber. The study clearly shows that the district suffered heavy losses in agriculture, livestock, irrigation infrastructure, transport, communication, and housing. Rice crops and other agricultural lands were washed away, which directly affected farmers' income and also damaged the next crop season. Irrigation canals and branches faced hundreds of cuts and breaches, making it difficult for farmers to prepare land even after the floodwater receded. Thousands of kutcha and pakka houses collapsed, forcing families to live in unsafe conditions and creating large-scale displacement.

Employment also declined badly because people depended mostly on farming, transport, and small daily businesses, all of which were affected by the flood. Roads and bridges were damaged, increasing travel costs and making it difficult to transport food and goods. This situation caused high inflation in the district, and the prices of essential items became unaffordable for many families.

Although the Sindh government and NGOs provided tents, ration bags, cash assistance, and other relief, the majority of people were not satisfied with the government's response. They believed that the help was very small compared to the scale of their suffering.

Overall, the study concludes that the flood of 2022 pushed the already vulnerable population of Kamber-Shahdadt Kot Kamber into deeper poverty. Strong and long-term planning, better irrigation management, strong infrastructure, and timely disaster response systems are needed to protect the district from future disasters.

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