



Research Article

Post Flood Economic Challenges, Resilience and Rehabilitation Strategies with Thematic Analysis Approach: A Case of Larnaka

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Abstract: Climate change has exacerbated the frequency and severity of floods, leading to devastating impacts worldwide. Pakistan has seen two catastrophic floods in recent years; at present, the full extent of the consequences of these calamities is still not fully acknowledged. Scarcity of water, rise in temperature, and floods are some cruel consequences that Pakistan has to bear. Floods may lead to huge economic problems not only for people in general but also for the communities. For instance, the condition of flooding in Larkana, which is the province where the agricultural activities are too much, could bring about financial and mental health problems. To tackle this research gap, this study implemented a qualitative research approach and conducted a thematic analysis to explore the economic challenges encountered in the Larkana region as a result of floods. Theme analysis is a method by which the researcher finds the sequential patterns in the data. Thus, the researcher is able to point out the issues that people face in reality. Resilient plans and rehabilitation measures can contribute to the solutions to these challenges, varying from immediate recovery to sustainable development. A multifaceted plan that encompasses immediate rescue operations and strengthening of resilience is a must. Social cohesion, environmental protection measures and governance issues are most relevant for the effective economic recovery after floods. The economic regeneration strategy in flood-prone areas must address complex issues to ensure local resilience and preparedness for the coming years.

Keywords: flood; Larkana; economic challenges; thematic analysis

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1. Introduction

Global warming is one of the most alarming problems which is getting more prevalent every day. In the recent past, the majority of natural disasters have been characterized by extreme weather conditions such as cyclones, tornadoes, tsunamis, and floods. Climate change has been identified as the main driver of the increase in the likelihood and severity of rainfall. This makes flooding more likely and makes them worse (Khan et al., 2021). Pakistan was shown to be one of the countries who have suffered from the consequences of climate change which has caused extreme floods and complicated the situations of the country even more. The year 2022 beheld the country with the most intense rainfalls and floods it ever had in the history written down. This calamity has resulted in migration of about 10 million people and led to a loss of many lives (Muhammad & Noor, 2023). Countries with a low income are faced with a risk of more serious flooding cases and the negative effects that are created by such episodes as lack of financial resources for implementing adaptation and mitigation measures is the main obstacle. The flood problem in Pakistan may be multi- faceted and cover many issues which have different impacts. Floods in the main rivers of Indus river system occur frequently in the country because of unusual weather patterns during monsoon season or simply because of melting snow. It is to be noted that Pakistan is vulnerable to both rainfall induced flooding as well as flooding that results from rivers going over their banks (Tariq and van de Giesen, 2012; Shah et al., 2022).

Floods are called hydro events which take place when excessive water is spilled on the normally dry land. Floods can result from different reasons including heavy rainfall, storm



surges, melting quickly, dam failure or a combination of these among others (Angelakis et al., 2023). Floods are a complex event that are closely linked to the geographical, medical and climate factors. Dust pollution can be classified as environmental and human health issue, and may bring about irreversible damage. The number of victims has increased in a certain direction due to climate change. The country has experienced severe flooding in recent years, among which are 2010 Great Flood and the Monsoon Flood 2022, causing great loss of life and damage in a large scale (Waseem & Rana, 2023). The floods have caused huge damage to healthcare infrastructure, mainly with the destruction of healthcare facilities, and there exists a risk of disease spread (Nasir et al., 2023).

The floods in Pakistan have resulted in significant economic damage (Mir, 2023). The floods caused severe damage to medical infrastructure, and medical facilities, and posed a risk of spreading infectious diseases. The floods in Pakistan caused significant economic losses. The country is highly vulnerable to flood damage due to excessive dependence on agriculture and limited water supply. Pakistan is facing a historic crisis. Floods in 2022 caused widespread damage, in the coastal areas of the country. About 30 percent of Pakistan's land has been flooded as a direct result of climate change, a problem that is affecting the rest of the world (Iqbal et al., 2022). In addition; the floods have damaged the economy, destroyed infrastructure, and damaged sources of income (Waseem & Rana, 2023).

According to Iqbal, the National Disaster Management Report investigates how devastating floods have a significant impact on millions of people. At the same time, the country faced a severe economic crisis due to the destruction of livestock and agricultural land. As a result, there are severe food shortages that make flood victims more vulnerable to humanitarian crises. In addition, floods can have a significant impact on the social economy; they can endanger human lives and lead to a recession (Waseem & Rana, 2023). The study on floods in Pakistan highlights gender dynamics, social connections, livelihoods, food security, risk perception, and vulnerability assessment. More research is needed to understand the socio-economic and institutional barriers that reduce flood risk. Adapting to climate change and reducing flood risk is critical to the development of populations that are vulnerable to flooding.

Pakistan has been affected by a lot of natural disasters. Floods have led to the loss of human lives and property. Heavy rains have been flooding nearly all regions in the country. Floods have been caused by heavy rains that have caused loss of lives, property, and the economy as a whole due to the flood (Raza et al., 2023). For a solution to the devastating impact of floods, it is crucial to take regulatory action on climate change, enhance disaster recovery, build up new reservoirs, and offer up to date agencies. The other study was also tackled issues related to social and economic impacts in diverse areas. Larkana is one of the main districts in Sindh province of Pakistan and is affected by the floods of heavier magnitude. Flooding is a common phenomenon that is caused by either the rivers over flooding or emergency flooding in this area. Infrastructure weaknesses, destruction of forests, and water resource management short-comings have made flooding to be worse (Setiawan et al., 2022). The scope includes examining and scrutinizing the economic problems of Larkana region because of the recurring floods.

1.1. The Significance of Resolving Economic Challenges after Flooding

The economic challenges after a flood are huge, especially for those with low income and happen to be the most vulnerable in this matter. The challenges that this kind of inflation brings about include the reduction of savings, hence it leads to financial insecurity for households, and this impacts mental health and emotional well-being (Matczak & Hegger, 2021). Pakistan has a long history of many natural disaster impacts and tanks are recurring challenges. Over the decades, the country has suffered from a wide range of hazardous pollution, contamination, and serious injuries (Nasir et al., 2023). Pakistan's recent coastal areas have been described as the worst crisis in the country's history (Bhamani, 2022). Prevention and rescue after earthquakes is a major problem in developed and developing countries. High-intensity fires can cause large-scale earthquakes damage the road surface and affect power overall. He stressed the importance of building Pakistan's stability and maritime resilience in the future to minimize damage and promote sustainable stability as a priority. The agricultural sector, an essential component of the economy and an important source of employment endured considerable challenges as a result of crop losses and decreased yields (Sohail et al., 2023).

The flood in Larkana, a province of Pakistan renowned for its agricultural importance, is likely to have significant and long-lasting economic ramifications. Flooding has a significant



impact on the economic situation of the population in the Larkana district. Agriculture plays a crucial role in providing food in the region, and when crops are destroyed due to flooding, it can lead to economic hardship for farmers. Disruptions in transportation and trade negatively affect firms, resulting in financial losses (Mani et al., 2018). Disaster recovery is a major issue for governments and communities in developing countries. Timely rehabilitation is needed, as quitting can increase the cost of social life and increase economic and social difficulties (Dinh et al., 2021).

Moreover, the process of land restoration after floods is a multi-pronged effort. Integration and land relocation strategies can help speed up reconstruction. Disaster recovery is a multi-pronged effort that includes the restoration of physical infrastructure, mental health rehabilitation, and economic recovery (Bortolin & Olagnero, 2024). Effective strategic planning and coordination are required to mitigate the impact of future floods due to climate change (Mannakkara & Wilkinson, 2015). They explored the possibility of building a robust infrastructure, including flood-resilient construction and an improved water management system. Active community involvement is essential for building sustainability. Nongovernmental organizations (NGOs) play an important role in subsequent flood recovery and resilience efforts (Hossain, 2021). However, we should enumerate that the scope of services includes granting loans, housing, sanitation, income-generation activities, assistance to the agricultural sector, involvement in infrastructure projects, and government participation. Communication between the local national and international institutions plays an important role in addressing the complicated situation with floods in the region of Larkana and similar areas of risk.

1.2. Problem Statement

Pakistan is very susceptible to the impacts of climate change and encounters challenges in accurately identifying suitable recipients and assuring the efficiency of disaster relief initiatives (Ahmad & Ma, 2020). The Larkana region is experiencing severe economic hardships as a result of the floods. This issue emerges due to a multitude of intricate factors. These encompass harm to agricultural infrastructure, fatalities, and disruption to small industries. Furthermore, the process of land restoration following floods requires the collaboration of multiple sectors. Soil integration and adaptation strategies can help restore the soil. Disaster recovery is an interdisciplinary effort that includes physical infrastructure recovery, mental health recovery, and economic recovery (Bortolin & Olagnero, 2024).

After floods, priority should be given to restoration and development of rehabilitation capacity of the affected areas. This includes repairing infrastructure and developing plans to reduce the region's risk from future floods. Thus, the study examines the economic challenges caused by flooding in the Larkana region and aims to develop a sustainable recovery strategy. The study will help develop evidence-based sustainable recovery policies and disaster preparedness and empower flood-affected communities. It will also enhance academic knowledge. Will meet the Sustainable Development Goals and have an educational impact on regional cooperation and effective disaster response.

1.3. Limitation and Delimitation

There is a lack of research on the economic effects of floods in Sindh, specifically regarding the strategies for restoring and reconstructing the Larkana region. The lack of research on the issue can be ascribed to various general and special limitations. The paper centers on the present economic difficulties encountered by Larkana, Pakistan, and we begin by discussing the matter. Assess these challenges using a thorough methodology and investigate how advanced strategies can efficiently tackle them. This can be achieved by using thematic analysis and established approaches. Hence, the aim of this study is to provide vital insights to policymakers and decision-makers, enabling them to address the issue through the implementation of sustainable economic policies that foster preparedness for the future.

2. Literature Review

Having floods as the most destructive type of natural disaster and the recent floods in Pakistan which are causing the most terrible damage, is the best example of it. The provision and maintenance of constant flood management and control regulations is therefore a critical step; in this case, this has the potential to reduce the chances of economic depression which pose a threat to man's existence and also maintain ecological balance. Flood catastrophes have large-scale and advanced complexity damage on a worldwide scale (Manzoor et al., 2022). The floods in Pakistan have resulted in great economic losses of several types including the



destruction of infrastructures on a large scale, a major dislocation of population and damage to infrastructure. The disasters themselves lead to aggravated poverty and socio-economic inequalities, endless depletion of the limited resources, provision of aid hindrance, and slow recovery process (Ashraf et al., 2023). The most inundations happened in the wet season of 2022, which was marked with very heavy rains over the nation, as well as with occasional heavy downpours. The two provinces of Sindh and Baluchistan were the most affected by this, the month of August was the most toxic level, which was the period having the highest toxic level. To that end, we will use the maximum precipitation that occurred during the sixty days duration and five days period in Indus basin and the two provinces that contain summer monsoon season (Muzammil et al., 2023).

The flooding in the agricultural areas of Sindh province of Pakistan, which is a result of water retention for a long period of time, has been a significant contributor to the adverse economic effects of the floods there. The floods filled the land for agricultural purpose, homes and other infrastructure which resulted in the crops destruction and erosion of the people source of livelihood. The huge flood has led to a massive loss of properties, to crops, soil contamination, interruption of agricultural operations, and decreased production, resulting in lower incomes, persistent soil erosion, food insecurity, and poverty (Atif et al., 2021). According to Raza, climate change is causing a significant increase in fertility. This is causing a lot of damage and impact to thousands of its residents. The increase in global warming increases the likelihood of severe climate impacts and leads to the destruction of homes, agricultural products, and infrastructure.

Pakistan has been inundated by unusually heavy rains in the areas of Baluchistan and Sindh. An unprecedented cyclone of the Monsoon season has caused the worst rains ever recorded in Pakistan. Villages have been destroyed. More than 3.4 million children require assistance and are at risk of waterborne diseases, drowning, and malnutrition. Floods have significant ramifications on human health, which can arise either from direct contact with floodwaters or indirectly via the devastation of infrastructure, ecosystems, food security, and water supply (Nadeem et al., 2022).

Ashraf (2023) revealed that the community possessed an in-depth knowledge of floods and migration plans, with participants who were well-informed about factors such as climate change, deforestation, and insufficient land management. Major impacts include the depletion of cultivable soil, the displacement of human communities, and the devastation of wildlife ecosystems. The scarcity of cultivable land has long-lasting implications for both the security of food supply and the means of survival, while the dispersion of human populations disrupts routine and interpersonal relationships. Animal structure destruction exacerbates financial hardships. Pakistan's stance is clear and direct. It is crucial to establish a financial reserve to provide compensation for losses and damages, with an emphasis on assisting underdeveloped nations which are most severely impacted by climate change, as they make attempts to recover and rebuild (Edwards, 2022).

According to the Asian Development Bank, Pakistan's water security disaster risk management performance in Asia is considered unsatisfactory due to substantial obstacles in trust and engagement among South Asian nations. It is crucial to improve the accessibility of healthcare, clean water, and sanitation in the affected areas, strengthen disaster preparedness and response, allocate additional resources for research and development, raise public awareness, and promote the adoption of sustainable development methods (Khan Mohmand & Loureiro, 2022). It is affirmed that Effective administration of disaster management is crucial for the swift provision of aid, restoration, and recovery after climate calamities. Clear policies, legislation, and institutional structures encourage efforts that mitigate risks, adapt to climate change, and foster resilience. These techniques guarantee that different stakeholders can react in a timely and prompt manner (Waseem & Rana, 2023).

It is identified that Effective disaster management is crucial for delivering aid, restoring normality, and reconstructing subsequent climate catastrophes. In Pakistan, parties involved in the reaction can engage in five specific actions: aiding in the gathering of data, fostering collaboration, supporting the merger of institutions, advocating for the distribution of funds, and enhancing long-term procedures for social protection. Addressing these limits is crucial to prepare for impending climatic catastrophes (Khan Mohmand & Loureiro, 2022). In 2022, the Indus River saw a small flood peak, which was made worse by an unexpected monsoon rain, leading to more rainfall. The water volume in the Larkana floodplain and Manchar Lake underwent a substantial augmentation, leading to the rupture of a dam and the subsequent happening of an outburst flood. In 2022, there will be major floods due to floods in major rivers. In August 2022, Baluchistan in Pakistan exceeded the normal level by 590% and in the



state of Sindh this month by an average of 726% (Qamer et al., 2023).

There is a need for an integrated approach to the flood rehabilitation process in Pakistan, such as integrated planning, control reforms, and targeted disbursement of assistance. Key aspects include robust data collection methods, collaboration between government authorities, NGOs, and community agencies, institutional integration, efficient allocation of resources, and strengthening of social protection systems. Effective and sustainable recovery outcomes require data-driven decision-making, inter-sectoral collaboration, institutional integration, and resource-based use. Effective collaboration between national, local, and regional authorities is essential for the successful implementation of the recovery plan. Enhancing social protection systems safeguards vulnerable populations and aids in recovery endeavors, while community-driven disaster risk management initiatives foster local resilience (Khan Mohmand & Loureiro, 2022). Pakistan's resilience to flood disasters is crucial for sustainable development. Key elements include integrated water management, infrastructure investment, improved governance, and forecasting capabilities. Water management optimizes resource use, infrastructure investments minimize flood risks, governance improves coordination, and predictability enhances response efforts. Education and awareness-raising strengthen community preparedness (Mendoza & Khero, 2016). Assessing the magnitude of destruction after a catastrophe is crucial for efficiently addressing the hazards linked to climate change. The COP agreements take into account the need to assess and manage losses and damages despite the remaining challenges. To address these challenges, it is necessary to ensure the long-lasting involvement of political authorities, strengthen technical cooperation, and involve multiple actors. Moreover, it is very important to take precautionary measures to reduce the risks. Disasters prevent vital services and lifestyles. At the same time, low yields affect food security and the ability to cope with economic challenges. Immediate relief interventions, medium-term ameliorative treatments, and long-term resistance-building strategies are required to address these losses. We can promote holistic improvement by prioritizing disaster risk reduction, climate adaptation, and sustainable development (Qamar et al., 2023).

2.1. Gaps Identified

There is a lack of comprehensive research on economic challenges and resilience in flood-affected areas such as Larkana. Current research focuses on specific strategies for recovery. More research is needed to investigate the effectiveness, scope, and long-term feasibility of rehabilitation interventions. This includes infrastructure reconstruction, livelihood support, and community-based resilience measures. Often, research ignores the local context and focuses on a larger national or regional context. To ensure effective interventions, it is important to take into account community feedback and involve them in the decision-making process. A more detailed analysis is needed; Current research often documents the direct consequences of disasters without considering their long-term effects. There is a lack of interdisciplinary point of view representation, and further research can enhance decision-making and policy-making that will lead to better resilience and well-being for flood-affected communities.

3. Materials and Methods

This study utilizes a qualitative research design to look at Larkana's economic challenges and resilience strategies in the wake of flooding. Thematic analysis is utilized to catch participants' encounters and provide an in-depth comprehension of the economic impacts. The methodology allows an intensive assessment of research questions, producing significant discoveries for post-disaster resilience and rehabilitation strategies.

3.1. Research Design

The research methods we implemented in this project were the qualitative research method and thematic analysis respectively, where we looked into the economic problems of the flood-affected region in Larkana. A study of this nature requires a comprehensive analysis of the strengths and the industry's impact on society. Thus, it becomes easier to pinpoint the complicated and wide-ranging issues. Qualitative research can be considered the key method in economic research which implies exploring the options and problems encountered by people working in the field. Such outcomes can be used to demonstrate the effectiveness of the proposed methods, validate assumptions, develop tactics, help in decision-making based on facts, and solve economic issues (Radović-Marković, 2023). Thematic analysis is a method for systematic research used in qualitative research that investigates some regularity in the



data and this is also very helpful in outlining the problematic occurrences of real life (Olagunju et al., 2020). This process more specifically comprises the data acquisition, the coding process, the description of themes, and the explanation of these themes. This is the trend that is widely adopted in different fields, such as social sciences, anthropology, psychology, and economics. Gathering data from various sources will be the main objective of this task. It may include behavioral aspects, attitudes, and social standards (Alkier Gildberg & Wilson, 2023).

3.2. Interview Process

The review led to interviews in participants' working environments to acquire inside and out bits of knowledge about the economic difficulties brought about by floods. Semi-structured interview, directed by a central inquiry, "What economic issues have the floods caused in your district?" The interviews were led with prompts, taking into consideration intensive conversations and profound investigation of members' experiences. The semi-structured approach guaranteed precise information catch, capturing the intricacy of the economic difficulties faced by flood-impacted networks.

3.3. Participants

The objective of the study is to comprehensively analyze the perspectives of a diverse group of individuals from the affected areas regarding the immediate consequences of the floods in Larkana, Sindh. This study has utilized objective sampling methods to select volunteers from a wide range of demographic categories. Participants were selected from different groups based on the age, education and sex who have been directly or indirectly impacted by floods. These individuals encompass farmers, urban inhabitants, policymakers, and community leaders. These have ensured the inclusion of a wide range of different points of view about their concerns and issues.

3.4. Data Collection

A fully structured interview is an important way to gather information, Community leaders, government officials, NGOs, and the business community can share their experiences and perspectives. Interviews were held almost 50-60 minutes per participants in order to ensure the reliability and accurate understanding of the problem. Fields observations were also used for making the collaboration between data given by participants and official records of governments and NGOs. Specially developed guidelines for semi-structured interviews are used to promote unlimited discussion and gather useful qualitative information.

3.5. Data Analysis

The major analytical approach will be thematic analysis, following the six-phase process established by Braun and Clarke (2006). This process entails acquiring a thorough understanding of the data, creating preliminary codes, identifying patterns, evaluating them, establishing clear definitions, assigning appropriate labels, and finally, documenting the findings in a report. According to Majumdar (2022), thematic analysis, through its iterative process, guarantees a comprehensive investigation of the qualitative data.

4. Results

4.1. Government's Role in Resilience and Rehabilitation

The Government's role in post-flood recovery is crucial, with participants acknowledging its efforts in rescue coordination, infrastructure rebuilding, and community restoration. However, concerns have been raised about the effectiveness and inclusiveness of relief distribution mechanisms. One participant informed "The government authority did an exemplary job in planning rescue tasks. The prompt reaction was efficient at the district." Participants noted differences between government efforts and actual relief services, bureaucratic challenges, delays in aid distribution, and insufficient resources for vulnerable groups. Another participant notified "The Government guaranteed a great deal regarding reconstructing the framework and giving help, however, on the ground, the situation was very unique. Many individuals in distant regions were disregarded, and the resources designated were lacking." They also agreed on the need to improve relief mechanisms to ensure timely and equitable assistance for all affected persons, ensuring no local communities escape flooding. It includes Fixing up the facilities, helping to maintain a way of life and getting the economy back on track, rehabilitating people and communities, increasing the abilities, and making the institutional structure stronger.

4.2. Overall Strategy for Rebuilding

Amidst the flood, the government has introduced measures for economic mitigation,



which include financial assistance, endorsement of grants, and schemes that promote new technology. Initiatives are carried out to enable the people to fight the floods, providing financial relief also and helping them regain their economic power. One participant stressed the role of financial help "The financial help specified by the government has been a rescuer for the majority of us. It has supported us with economically improving and initiated restoring our lives and businesses." Another participant "The grants provided by officials have helped us for resilience and rebuilding our social and economic life."

As per the analyzed theme, livelihoods play a crucial role in building economic stability and resilience, which is the process of the community overcoming economic downturns. The government's strategy of taking actions to combat the economic consequences of the rainy season includes the support for areas that are suffering from the impact and the stimulation of the adaptability of the affected regions. The members also made a point about how the process of tweaking and adjusting support over time would be vital for the triumph of marginalized community's anti-discrimination campaigns and their continuous and comprehensive healing.

4.3. Measures to Address Economic Challenges

The government's recovery plan demonstrates a methodical approach that emphasizes swift restructuring, gradual reconstruction, and long-lasting adaptability. This statement promotes the need for empowering all personnel engaged, promoting teamwork, and incorporating sustainability ideals into strategic endeavors. Participant shared his views "The government's precise restoration plan, combining quick rebuilding with steady restoration, has actually inclined to prompt provisions and arranged for long-haul recovery, in this manner balancing out effected districts." The government's principal objective is to guarantee community involvement in every area of planning, decision-making, and implementation. This strategy promotes assurance and transparency and stresses activities that are tailored to fulfill the distinct needs of the target audience. The government's flood restoration policy is carefully designed, taking into account all stakeholders, with a focus on long-term sustainability and active community involvement. The goal is to tackle current issues and build a strong foundation for continued survival and economic success.

4.4. The Role of Political Parties in the Process of Reconstruction is Significant

The Pakistan People's Party and Grand Democratic Alliances have indeed been the two main political forces that have fostered the economic strategies for the country which will be able to recuperate from the aftermath of the floods. The research of political parties was revealed to be highly influential in the political sphere and also had control over the choice and implementation of the recovery economic revitalization programs. Both categories are considered the critical agents involved in the process of economic recovery plans participated by political parties. As participant asserted "The Pakistan People Party and Grand Democratic Alliances have been contributory in making the financial recovery systems in the region. Their influence promises that the restoration plans are comprehensive and well chosen." Differences in political opinions are there, but public-private partnerships and Global Development Action personalization are all set and willing to be one to address the community that has been affected by floods. The bilateral climate dialogue is the means of forming the party leader's mutual understanding that unity and co-responsibility are vital for the political parties. They will be teaming up together to combine their efforts for the sake of society's welfare. On top of this, he also emphasized the need for cooperation between different political parties to realize that when policies are put forward, they should be adopted and implemented correctly.

Political parties could be better prepared to be more popular, put pressure on policymakers, and join forces to tackle flood-related socio-economic problems through the cooperation of organizations. One participant "It's reassuring to see political parties making peace and cooperating through public-private partnerships. This coordinated effort is imperative for addressing the socio-financial issues brought about by the floods." Nowadays the role of wealth distribution has been displayed by the parties in economic recovery. There is also the role of providing enough funding for the projects, infrastructure investment, and development programs that are required to strengthen the recovery activities post-disaster. Parties can ensure the provision of funds for both short-term and long-term recovery needs of areas, by budgeting and structuring policy measures for economic rebuilding. One participant assured "Provision of funds to the affectee is ensured with the help of political parties, who also brought policies and budget-related allocations of funds for the recovery of communities in the region." The most fundamental partners are the Pakistan People's Party and the Grand democratic alliances which stand for providing



solutions through policies and actions that are all embodied in the economic rehabilitation after the flood. However, in the end, the most significant thing of the voters should be to be aware of the honesty, openness, and loyalty to politics to make sure that everyone's needs are met and the recovery process is fair for everybody.

4.5. Political Parties' Role in Economic Stability

The Pakistani People's Party and Grand Democratic alliances along with other political parties could be said to be the most competent association in the enhancement of the economic conditions of the nation which are the most significantly affected by the floods. It is the main driver of policy-making, investment promotion, monitoring of the activities of colonialists, and the creation of a setup that encourages unity and avoids all forms of discrimination. It is this way that seems to be the best one for those communities who have been hit by floods and want to improve their quality of life and build a community that puts peace, solidarity, and trust among its members. Political parties are candidates in elections with policies on economic recovery, development of critical infrastructure of the flood-prone community, and response to those who suffered in flood areas. It is through these methods that the legislative changes, changing of criteria and concrete plan are done. Along with that, it gives shelter to the property and redistributes resources in the agricultural field after the flood, and at the same time opens up the way for the investments and partnerships that are made with both the public and private sectors. Same way participant expressed "During the election, political parties featured their tactics to financial restoration and framework development for floodinclined regions. Their governmental changes and extensive plans are essential for safeguarding property and guaranteeing resources adoption."

The repetitive recasting of activities is what keeps the economic health of societies intact; from here, the security and stability of the threatened areas are promoted. Political parties as the key influencers in the transition of the economic state to the resumption of normal operations after the recovery period. The first point is that they highlight the importance of integrity and accountability as the main factors and that these should involve political stakeholders so that everyone is on the same page indefinitely and has unanimously agreed on a deal.

4.6. Government's Assistance and Impact

The Deputy Commissioner is a crucial figure in giving great assistance to the local community when floods occur through granting financial assistance, job training, and infrastructure help. This included the handling of relief efforts and logistics as well as the allocation of resources and implementation of relief programs. Interview participants "The Deputy Commissioner's activities in allowing monetary help and sorting out work preparation have been important. Training and development drives provide quick assistance as well as deliver people with the abilities anticipated to transform their lives." Our priority is to offer relief to the people affected by floods and to already vulnerable populations and provide them with assistance. Government aid extends to more than the mere currency for vocational training initiatives and also ensures that individuals are provided with the required skills and experience for them to rebuild their lives. The deputy Commissioner will increase the resilience of flood-entered local communities by funding infrastructure projects that will involve the repair of roads, bridges, and public facilities. These projects have served as an instrumental tool in the restoration of necessary services in the region, and also created jobs, boosted economic growth, and contributed to the general progress and recovery of the region. Nevertheless, providing continuous support, monitoring, and evaluation is no less important to ensure that strategies that help to cope with increasing disaster needs are effective, durable, and support the whole process of recovery after a flood.

4.7. Main Economic Concerns of Community Members

The study highlights the importance of including the local community in decision-making processes, implementing sustainable agriculture techniques, and fostering the creation of local project organizations to improve economic resilience in flood-prone areas. He stressed the importance of including local people in the development of treatments that directly affect their way of life and well-being. Participant noticed "To know the difficulties from local habitants is crucial for understanding the overall disaster jurisdiction. They know best whatever they need, and their feedback guarantees that facilitations are appropriate and persuasive." This includes determining priorities and implementing the interventions. Sustainable farming involves a range of practices, such as organic farming, water conservation, ecological agricultural systems, soil health enhancement, biodiversity conservation, and the capacity to adapt to



climate instability. These solutions improve agricultural productivity, reduce dependence on external resources, and alleviate the impact of flooding on food security and lifestyles. Another participant "Achievable cultivating procedures are central for our local area. They support with supplementary developing efficiency and make us less dependent upon outer funds, which are momentous in the midst of the flood."

Enabling project coordination at the community level is equally crucial for promoting economic flexibility and increasing income opportunities. Training, financing, and establishing connections with the market can offer assistance to small local industries and community companies, leading to the generation of income, development of employment opportunities, and fostering economic expansion. Fostering a sense of ownership and control among local communities is essential for improving their ability to adjust economically in the long run. Concurrently, initiatives led by local communities can construct flexible economies, improve revenue generation methods, and foster sustainable development.

4.8. Community Contribution to Long-Term Economic Resilience

The report is of great importance because it demonstrates the fact that all people should be involved in the decision-making process, the implementation of sustainable agriculture, and the development of local initiatives that will provide the solution to long-term economic transformation in impoverished flood areas. Participant response "It's energetic that everyone locally engages in direction and decision making. When we unite, we can reach the accurate decisions that lead to sincere improvements in our lifestyle." In this case, social communities should work in a collaborative way to influence lifestyle selections and activities that lead to change in a community. The community, on its own, should be responsible for taking action in the implementation of such a targeted action. The implementation of sustainable agricultural practices (like organic farming, water conservation, etc.) would result in better soil quality; more specifically, these would increase biotic and abiotic diversity and the land's ability to withstand climate change. The central role of the process is to select the most important projects, taking into account the idea of project implementation with the cooperation of the institutions responsible.

The government will be an essential, if not the most important, driver for the set-up of such ventures and the production of revenues. In the same way, ownership like this among the school neighborhood residents along with independence is also a factor. Another participant "When local area entities feel ownership and obligation, they are more devoted to the drives. These initiatives of economic measures that are both supportable and adoptable." Through community-driven action, the economies, methods of production, and sustainability could be strategized and possibly become versatile economies.

4.9. Role of NGOs in Sustainable Economic Development

This fact pinpoints that NGOs are the key players in promoting sustainable economic development in the areas affected by flooding by creating a continuous cycle of the process. NGOs play substantial role in uplifting individuals and communities by giving them training opportunities, employment and education. These initiatives aim at providing people with the skills, knowledge, and support needed not only to overcome economic barriers but also to take advantage of growth opportunities. As participant "NGOs have been active in local restoration. Their preparation programs and informative and awareness determinations have specified us the abilities and information we need to adapt and flourish financially. Without their help, a major number of us would in any case be struggling." Along this, it also suggests the importance of life-long learning; one can obtain new skills, expand on the ones which are already there and improve personal development. NGOs improve market opportunities and business assistance for the financially underprivileged and also make financial markets more accessible for such people. Consequently, they undertake to promote the emergence of business and equip the business people with the necessary tools for the startup and self-reliance in economic matters. First and foremost, it brings to the fore the role played by community-based projects that are inclusive, collaborative, knowledge sharing, tech driven, and future-oriented in the process of realizing the SDGs.

NGOs are empowering themselves by involving the social partners like the government agencies and the private sector in that regard. This may thus allow them to come up with these new ways and design the best development solutions. NGOs are often the frontline workers, who are more concerned with the people affected by floods, and help them to develop the economies which are more flexible, to raise financial resources and to live in a healthy environment. "The employment opportunities given by NGOs have been a help for the vast majority locally." While it is true that interventions should be supported by a continuous



involvement of the actors, cooperation, and adequate resources, the fundamental issue remains that, in the long run, their effectiveness and sustainability should be ensured.

5. Discussion

Government support promotes business and sustainable livelihoods for entrepreneurs and communities. It provides resources, incentives, and policies, empowers entrepreneurs, creates jobs, stimulates economic growth, and promotes community development (Vaidya & Kumar, 2019). The recovery plan keeps coming back to the ideas of working together with stakeholders, long-term growth, and getting the community involved with the support of government initiatives, project managers have demonstrated innovation and risk-rebuilding operations. The positive effect of putting in place conducive environment, where the processes will be implemented, will include the creation of new economic growth and work channels. It has been proven flexible and robust, as communities have overcome the adversities only to rise in the end via the organizational activities. The government is crucial in creating enabling conditions that ensure the smooth functioning of the private sector which ultimately will bring about the improvement of living standards and will strengthen the local economy (Kazi, et al. 2017). The community members' integration is parallel to the principles of the Sendai Framework for Disaster Risk Reduction that recognizes the significance of the investiture of community members and their knowledge in the recovery plan development (Radel et al., 2023).

Financial aid was one of the pillars of people's daily life, where it helped people in heavy activities and encouraged infrastructural restorations. The involvement of the local community in disaster risk reduction is not only a burden relief for the government shoulders, but also a complete disaster risk reduction process. It is essential in the ability to deal with unforeseen situations and always be ready. This approach provides for the engagement of the active population, sustainable lifestyles as well as risk management which are the very ways we are going to fight the spread of the disease. The ultimate goal is to empower the communities to the level where they can tackle disasters on their own, and recover from disasters in a short time (Bali, 2022). The political parties, in particular, are indispensable to the state government, as they act as the mediators between the public and the government. They plan and design programs and policies, they use resources carefully, and they do their best to eliminate the social problems (Baume, 2018). Two political parties, the PPP and GDA, are given this task of not just putting forward the policies that are able to revive the economy, but also ensuring that these policies are implemented. Community engagement is a crucial element of rehabilitation as it involves the interplay of professional services with individual and organizational input. It is the means of getting to know about leadership, strategic planning, resource mobilization, financial assistance, inclusive rehabilitation efforts, selfreliance and generally better life for people with disabilities (Alessandro, 2023).

6. Conclusions and Recommendations

Economic challenges that are included after the flood can be lessened through resilience and rehabilitation plans that involve community in the decision-making process, and address their primary causes. This phase is the most delicate one which follows the flood disaster. It should be done with care and by using the strategies of resilience and rehabilitation to face the economic difficulties that the people affected by the flood are facing. These strategies should not only be about the immediate healing but more so about the strategies that are sustainable and could build resilience. The key to successfully managing economic problems after the flooding will be an active approach that is determined to achieve the short-term recovery process and long-term resilience building. A number of post-disaster economic rehabilitation strategy reports and studies, for example the ones from 2020 (Morrish & Jones 2020; Rouhanizadeh et al., 2020), point out that this is the case. The analysis of strategies identifies two things: thus, two sides of the coin: rebuilding disaster impacted areas and building communities' resilience against future disasters. An undertaking of frameworks to comprehensively understand and analyze the community's plurality of livelihood pursuits and vulnerabilities is an important step of this process. Sustaining the disaster-resulting vulnerability factors such as resource access, marginalization, market access, power imbalances, lack of information and sustainable utilization of resources will be among the key issues to be addressed in the post-flood rehabilitation efforts that will be key in the long-term contribution.



However, communities should be part of the decision-making process and be able to determine for themselves the way forward. Community-driven development allows programs to be built for communities according to their requirements and desires which makes the beneficiaries feel like they own the programs and the leadership is in their hands. The fact that this is holistic makes the communities involved in the entire process. The "recovery" should be the multidimensional approach, which will be the achievement of economic activities and the analysis and helping to solve problems that have occurred. The period of time that follows a flood is an excellent opportunity to have a territory renovated so as to reduce the vulnerability to future floods. The evaluation of case studies and the community's knowledge and culture indicate that the process of community resilience development is complex and dependent on the role of diverse stakeholders and factors. A gamut of the variables is in fact considered when the community members decide the future of their town. These groups are composed of their individual views and experiences, local indigenous knowledge, historical context of the area, and roles of informal-traditional and quasi-formal institutions. Ultimately, these components are the most effective bases for the quick rebuilding and becoming transformed into a flourishing local economy and livelihood. Moreover, the social, physical, and institutional factors of resilience and rehabilitation are also important. Therefore, an all-round approach is adopted. Of course, the most appropriate flood management system will include the combined efforts of socio-economists, engineers, ecologists and not only have the economic impact but also the environmental influence. Nonprobable flood protection schemes are high-cost and lead to changes in the environment that the community of today cannot afford. The outcomes of this research should lead us to the consideration of other flood management strategies like green infrastructure (Auerswald et al., 2019). Research has proved, that the degree of economic recovery is functionally related to social solidariness, ecological sustainability, and efficient governance. Therefore, the strategy of economic revival in flood-risk areas should be designed and implemented in such way that it will consider all the complex issues that have been mentioned above so that the communities will be highly resilient and prepared for the future.

References

- Ahmad, M. I., & Ma, H. (2020, April). An investigation of the targeting and allocation of post-flood disaster aid for rehabilitation in Punjab, Pakistan. *International Journal of Disaster Risk Reduction*, 44, 101402. https://doi.org/10.1016/j.ijdrr.2019.101402
- Alessandro, G. (2023). Community, health and rehabilitation. *Journal of Community Medicine and Health Solutions*, 4(1), 001–003. https://doi.org/10.29328/journal.jcmhs.1001025
- Alkier Gildberg, F., & Wilson, R. (2023). Scientific models for qualitative research: a textual thematic analysis coding system part 2. Nurse Researcher, 31(3), 36–42. https://doi.org/10.7748/nr.2023.e1893
- Angelakis, A. N., Capodaglio, A. G., Valipour, M., Krasilnikoff, J., Ahmed, A. T., Mandi, L., Tzanakakis, V. A., Baba, A., Kumar, R., Zheng, X., Min, Z., Han, M., Turay, B., Bilgiç, E., & Dercas, N. (2023). Evolution of Floods: From Ancient Times to the Present Times (ca 7600 BC to the Present) and the Future. *Land, 12*(6), 1211. https://doi.org/10.3390/land12061211
- Ashraf, I., Ahmad, S. R., Ashraf, U., & Khan, M. (2023). Community perspectives to improve flood management and socio-economic impacts of floods at Central Indus River, Pakistan. *International Journal of Disaster Risk Reduction*, 92, 103718. https://doi.org/10.1016/j.ijdrr.2023.103718
- Atif, S., Umar, M., & Ullah, F. (2021). Investigating the flood damages in Lower Indus Basin since 2000: Spatiotemporal analyses of the major flood events. *Natural Hazards*, 108(2), 2357–2383. https://doi.org/10.1007/s11069-021-04783-w
- Auerswald, K., Moyle, P., Seibert, S. P., & Geist, J. (2019). HESS Opinions: Socio-economic and ecological trade-offs of flood management benefits of a transdisciplinary approach. *Hydrology and Earth System Sciences*, 23(2), 1035–1044. https://doi.org/10.5194/hess-23-1035-2019
- Bali, R. (2022). Importance of Community Awareness and Preparedness in Disaster Risk Reduction. Research Review: International Journal of Multidisciplinary, 7(10), 40–57. https://doi.org/10.31305/rrijm.2022.v07.i10.005
- Baume, S. (2018). Rehabilitating political parties: an examination of the writings of Hans Kelsen. *Intellectual History Review*, 28(3), 425–449. https://doi.org/10.1080/17496977.2017.1366728
- Bhamani, S. (2022). Record flooding in Pakistan poses major health risks. BMJ, o2148. https://doi.org/10.1136/bmj.o2148
- Bortolin, M., & Olagnero, J. M. (2024). Rehabilitation and Reconstruction. *Ciottone's Disaster Medicine*, 410–414. https://doi.org/10.1016/b978-0-323-80932-0.00063-x
- Dinh, N. C., Ubukata, F., Tan, N. Q., & Ha, V. H. (2021). How do social connections accelerate post-flood recovery? Insights from a survey of rural households in central Vietnam. *International Journal of Disaster Risk Reduction*, 61, 102342. https://doi.org/10.1016/j.ijdrr.2021.102342
- Edwards, E. (2022). Pakistan's flood recovery a shared responsibility. Water Science Policy. https://doi.org/10.53014/tdna7931
- Hossain, B. (2021). Role of NGOs in Post-Flood Rehabilitation in Chars. Springer Geography, 241–251. https://doi.org/10.1007/978-3-030-73592-0_14
- Iqbal, M., Rabbani, A., Haq, F., & Bhimani, S. (2022). The floods of 2022: Economic and health crisis hits Pakistan. *Annals of Medicine & Surgery, 84*. https://doi.org/10.1016/j.amsu.2022.104800



- Kazi, A. G., Yusoff, R. B. M., Ismail, F. B., Munastiwi, E., & Arisar, M. M. K. (2017). Entrepreneurship and Livelihood Restoration at Sindh Pakistan: Mediating Role of Firm Performance. *Advanced Science Letters*, 23(9), 8138–8143. https://doi.org/10.1166/asl.2017.9849
- Khan Mohmand, S., & Loureiro, M. (2022). Key Considerations: Supporting Better Governance of Flood Relief Efforts in Pakistan. Social Science in Humanitarian Action Platform. https://doi.org/10.19088/sshap.2022.036
- Khan, I., Lei, H., Shah, A. A., Khan, I., & Muhammad, I. (2021). Climate change impact assessment, flood management, and mitigation strategies in Pakistan for sustainable future. *Environmental Science and Pollution Research*, 28(23), 29720–29731. https://doi.org/10.1007/s11356-021-12801-4
- Majumdar, A. (2022). Thematic Analysis in Qualitative Research. In Research Anthology on Innovative Research Methodologies and Utilization Across Multiple Disciplines (pp. 604–622). https://doi.org/10.4018/978-1-6684-3881-7.ch031
- Mani, M., Bandyopadhyay, S., Chonabayashi, S., Markandya, A., & Mosier, T. (2018). Overview. In *The World Bank eBooks* (pp. 1–11). https://doi.org/10.1596/978-1-4648-1155-5_ov
- Mannakkara, S., & Wilkinson, S. J. (2015). Supporting post-disaster social recovery to build back better. *International Journal of Disaster Resilience in the Built Environment*, 6(2), 126–139. https://doi.org/10.1108/ijdrbe-06-2013-0019
- Manzoor, Z., Ehsan, M., Khan, M. B., Manzoor, A., Akhter, M. M., Sohail, M. T., Hussain, A., Shafi, A., Abu-Alam, T., & Abioui, M. (2022). Floods and flood management and its socio-economic impact on Pakistan: A review of the empirical literature. Frontiers in Environmental Science, 10. https://doi.org/10.3389/fenvs.2022.1021862
- Matczak, P., & Hegger, D. (2021). Improving flood resilience through governance strategies: Gauging the state of the art. WIREs Water, 8(4). https://doi.org/10.1002/wat2.1532
- Mendoza, G., & Khero, Z. (2016). Building Pakistan's Resilience to Flood Disasters in the Indus River Basin. Water Resources Development and Management, 81–110. https://doi.org/10.1007/978-981-10-1914-2_5
- Mir, S. B. K. (2023). Pakistan's Water Security Issue & Impacts of Floods. Asia Social Science Academy, 10(1), 55–63. https://doi.org/10.51600/jass.2023.10.1.55
- Morrish, S. C., & Jones, R. (2020). Post-disaster business recovery: An entrepreneurial marketing perspective. *Journal of Business Research*, 113, 83–92. https://doi.org/10.1016/j.jbusres.2019.03.041
- Muhammad, A., & Noor, S. (2023, July 15). Climate Change, COVID-19, and Flood disasters in Pakistan. *Journal of the Pakistan Medical Association*, 73(8), 1754–1754. https://doi.org/10.47391/jpma.9231
- Muzammil, H., Zaman, M., Shahid, M. A., Safdar, M., Majeed, M. D., & Sabir, R. M. (2023). The Impacts of Climate Change on Monsoon Flood Situations in Pakistan. *ECWS-7 2023*. https://doi.org/10.3390/ecws-7-14255
- Nadeem, A., Sahito, A. M., & Shahid, S. (2022). Flood Crisis in Pakistan: a mass destruction to economy and fragile health care systems. Medicine, Conflict and Survival, 39(1), 81–85. https://doi.org/10.1080/13623699.2022.2157587
- Nasir, M. M., Khan, A. B., & Farhan, S. H. (2023). Monsoon floods: A challenge to Pakistan's already fragile healthcare infrastructure. *Journal of the Pakistan Medical Association*, 73(8), 1765–1766. https://doi.org/10.47391/jpma.7982
- Olagunju, T., Oyebode, O., & Orji, R. (2020). Exploring Key Issues Affecting African Mobile eCommerce Applications Using Sentiment and Thematic Analysis. *IEEE Access*, 8, 114475–114486. https://doi.org/10.1109/access.2020.3000093
- Qamer, F. M., Abbas, S., Ahmad, B., Hussain, A., Salman, A., Muhammad, S., Nawaz, M., Shrestha, S., Iqbal, B., & Thapa, S. (2023). A framework for multi-sensor satellite data to evaluate crop production losses: the case study of 2022 Pakistan floods. *Scientific Reports*, 13(1). https://doi.org/10.1038/s41598-023-30347-y
- Radel, K., Sukumaran, A., & Daniels, C. (2023). Incorporating First Nations knowledges into disaster management plans: an analysis. Presentation at the Australian and New Zealand Disaster and Emergency Management Conference 2022. https://doi.org/10.47389/38.2.36
- Radović-Marković, M. (2023). Qualitative methods in economic sciences. In How to Conduct Qualitative Research in Social Science (pp. 164–181). https://doi.org/10.4337/9781800376199.00016
- Raza, M., Fatima, A., Habiba, U., & Shah, H. H. (2023). Public health implications of severe floods in Pakistan: assessing the devastating impact on health and the economy. *Frontiers in Environmental Science*, 11. https://doi.org/10.3389/fenvs.2023.1091998
- Rouhanizadeh, B., Kermanshachi, S., & Nipa, T. J. (2020, November). Exploratory analysis of barriers to effective post-disaster recovery. International Journal of Disaster Risk Reduction, 50, 101735. https://doi.org/10.1016/j.ijdrr.2020.101735
- Setiawan, D. R., Hidayat, Y. R., Tamba, R. S., Suparman, S., & Zulkifli, Z. (2022). Peningkatan Pengetahuan dan Kemampuan Penanggulangan Bencana Banjir melalui Sosialisasi di Guru Dan Siswa di Kota Bekasi. *Jurnal Komunitas*, 5(1), 118–122. https://doi.org/10.31334/jks.v5i1.2447
- Shah, A. A., Ajiang, C., Gong, Z., Khan, N. A., Ali, M., Ahmad, M., Abbas, A., & Shahid, A. (2022). Reconnoitering school children vulnerability and its determinants: Evidence from flood disaster-hit rural communities of Pakistan. *International Journal of Disaster Risk Reduction*, 70, 102735. https://doi.org/10.1016/j.ijdrr.2021.102735
- Sohail, N., Sarfaraz, Y., & Rafique, A. (2023). Pakistan floods: An insight into agriculture and food supply. *Trakya University Journal of Natural Sciences*, 24(1), 1–2. https://doi.org/10.23902/trkjnat.1211393
- Tariq, M. A. U. R., & van de Giesen, N. (2012). Floods and flood management in Pakistan. *Physics and Chemistry of the Earth, Parts a*/*B*/*C*, 47–48, 11–20. https://doi.org/10.1016/j.pce.2011.08.014
- Vaidya, O. S., & Kumar, S. (2019). Multi-criteria Performance Evaluation Framework for Rehabilitation Service Operations. *Global Business Review*, 22(6), 1490–1506. https://doi.org/10.1177/0972150919826727
- Waseem, H. B., & Rana, I. A. (2023). Floods in Pakistan: A state-of-the-art review. Natural Hazards Research, 3(3), 359–373. https://doi.org/10.1016/j.nhres.2023.06.005