



# REPORT

## **RESEARCH STUDY ON EFFECTIVENESS & RESILIENCE OF HUMANITARIAN RESPONSE IN SINDH AND BALOCHISTAN**

**September 2024**

#### **ABOUT THE RESEARCH REPORT**

This research report is submitted by GLOW Consultants Private Limited for Research Study to Evaluate Effectiveness & Resilience of Humanitarian Response in Sindh and Balochistan for Action Against Hunger.

#### **ACKNOWLEDGEMENTS AND DISCLAIMER**

This research study report has been produced by GLOW Consultants with input from different documents shared by ACF related to its Research Study to Evaluate the Effectiveness & Resilience of Humanitarian Response initiatives in Sindh and Balochistan. The views expressed in this report are entirely those of the author and do not necessarily represent the ACF own views or policies. Comments and discussion on items related to content and opinion should be addressed to the consultant.

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## List of Acronyms

<b>ACF</b>	Action Against Hunger
<b>ADB</b>	Asian Development Bank
<b>CBDMC</b>	Community-Based Disaster Management Committees
<b>CBDRM</b>	Community-Based Disaster Risk Management
<b>CC</b>	Climate Change
<b>DEC</b>	Disasters Emergency Committee
<b>DRR</b>	Disaster Risk Reduction
<b>ECHO</b>	European Civil Protection and Humanitarian Aid Operations
<b>EWS</b>	Early Warning System
<b>FSL</b>	Food Security and Livelihoods
<b>FGD</b>	Focus Group Discussions
<b>GLOW</b>	GLOW Consultants Private Limited
<b>IFRC</b>	International Federation of Red Cross and Red Crescent Societies
<b>KII</b>	Key Informant Interviews
<b>M&amp;E</b>	Monitoring and Evaluation
<b>NDMA</b>	National Disaster Management Authority
<b>NGO</b>	Non-Governmental Organization
<b>OCHA</b>	United Nations Office for the Coordination of Humanitarian Affairs
<b>PDMA</b>	Provincial Disaster Management Authority
<b>PKR</b>	Pakistani Rupee
<b>RUTF</b>	Ready-to-Use Therapeutic Foods
<b>SIDA</b>	Swedish International Development Cooperation Agency
<b>SDG</b>	Sustainable Development Goal
<b>UNICEF</b>	United Nations International Children's Emergency Fund

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**Figure 1:** Interviews with Women Beneficiary During Assessment in Sindh (GLOW, August 2024)

## Information about **ACF in Pakistan**

Action Against Hunger (ACF) in Pakistan is a leading humanitarian organization dedicated to combating hunger and malnutrition while addressing the broader issues of food security, water, sanitation, and hygiene (WASH), and disaster risk reduction. ACF has been actively working in Pakistan for several years, particularly in vulnerable regions like Sindh and Balochistan, where communities face significant challenges due to poverty, natural disasters, and limited access to essential services. Through its programs, ACF aims to strengthen community resilience against natural disasters, improve the nutritional status of vulnerable populations, and ensure access to clean water and sanitation facilities. The organization collaborates closely with local governments, NGOs, and international partners to implement sustainable solutions that not only address immediate needs but also contribute to long-term development and stability in the region. ACF's work in Pakistan is guided by a commitment to humanitarian principles and a focus on empowering communities to achieve self-sufficiency and resilience in the face of adversity.



# Preface

<b>Assignment Title</b>	Research Study on Effectiveness & Resilience of Humanitarian Response in Sindh and Balochistan
<b>Commissioned by</b>	Action contre la Faim (ACF) Pakistan
<b>Data Collection</b>	August 2024
<b>Coverage Period</b>	2 years (June 2022 - June 2024)
<b>Geographical Focus</b>	<b>Sindh Province:</b> Khairpur and Thatta districts <b>Balochistan Province:</b> Jaffarabad, Sohbatpur, Pishin and Killa Saifullah districts
<b>Beneficiary Group</b>	<b>Pakistani</b> (flood affected and refugee host population) <b>Afghan</b> (flood affected and refugee population)

## Activities evaluated and their scope:

**Disaster Risk Reduction (Cross cutting/Integrated)** - In the context of this evaluation, Disaster Risk Reduction programming refers to strategies aimed at minimizing the risks and impacts of flooding by reducing vulnerability and enhancing community resilience. It includes assessing risks, establishing early warning systems, preparing contingency plans, and educating communities. DRR also involves preventive measures like improving public infrastructure, improving community response capacities, and ensuring quick response and recovery efforts. Overall, it focuses on building long-term resilience to reduce flood-related losses and help communities recover more effectively.

**Food Security and Livelihoods:** ACF implemented Food Security and Livelihoods (FSL) interventions aimed at supporting flood-affected communities to regain their income sources and food production capabilities. These activities included distributing emergency food assistance, providing seeds and agricultural tools to farmers to replant crops, and facilitating cash-for-work programs that offer short-term income while contributing to community rebuilding efforts. ACF also supported livelihood diversification to reduce vulnerability, introducing climate-resilient agricultural practices to strengthen food security in the face of future disasters.

**Water, Sanitation, and Hygiene (WASH):** As of Water, Sanitation, and Hygiene (WASH) activities in the flood-affected areas of Pakistan, ACF provided access to safe water, improved sanitation, and promoted hygiene practices to prevent waterborne diseases. ACF ensured access to clean drinking water and sanitation facilities in its areas of operations. Hygiene promotion campaigns, including the distribution of hygiene kits and education on handwashing and safe water practices, were conducted to reduce the spread of diseases like cholera and diarrhea, which was a major risk after the 2022 floods.

**Health and Nutrition:** The ACF's Health and Nutrition interventions focused on preventing malnutrition and providing essential healthcare services. Static and mobile health clinics were supported/deployed to deliver primary healthcare, including maternal and child health services, to hard-to-reach areas. ACF also ran screening programs to identify malnutrition among children and pregnant or lactating women, providing necessary support where needed. Nutrition education was integrated into these programs to promote healthy feeding practices and ensure long-term nutritional well-being.

## Donors

- Disaster Emergency Committee (DEC)
- The Swedish International Development Cooperation Agency (SIDA)
- European Commission Humanitarian Aid Office (ECHO)





## Executive Summary

This research study, commissioned by Action Against Hunger (ACF) through Disaster Emergency Committee (DEC) funding, employed a mixed-methods approach to evaluate the effectiveness of interventions and identify gaps in disaster preparedness and response efforts of ACF and other humanitarian organizations during and following the 2022 floods in the Sindh and Balochistan regions of Pakistan. Data was collected across six districts (see table #1) in these provinces, involving a comprehensive survey of 402 households, 14 Key Informant Interviews (KIIs), and 12 Focus Group Discussions (FGDs), of which six were conducted with female participants. The findings provide a detailed analysis of the successes and challenges faced in enhancing community resilience, addressing critical humanitarian needs, and implementing anticipatory response frameworks. Key findings across the objectives of this review are as follows:

### **Objective 1: Validating the Effectiveness of Interventions Aimed at Increasing Resilience Against Natural Disasters**

The evaluation revealed that the interventions implemented post 2022 floods to enhance community resilience were generally effective in reducing vulnerability and improving adaptive capacity of the flood affected population. Infrastructure improvements, Disaster Risk Reduction (DRR) training, and early warning systems played significant roles in helping communities better withstand the impacts of the localized floods of 2023 and 2024. However, the effectiveness of these interventions varied, with remote and marginalized communities often receiving less support. The report highlights the need for continued investment in resilience-building initiatives, particularly in underserved areas, to ensure equitable protection against future disasters.

### **Objective 2: Identifying Persistent Gaps Within Community Capabilities and Governmental Support Structures**

Despite the successes in resilience-building, the 2022 floods exposed significant gaps in community capabilities and governmental support structures. Critical humanitarian needs—such as health, nutrition, food security, social protection, and WASH (Water, Sanitation, and Hygiene)—were not consistently met, especially for vulnerable populations like women, children, the elderly, disabled individuals, and low-income households. The evaluation found that inadequate social protection systems, poor infrastructure maintenance, and insufficient community preparedness contributed to these gaps, leading to increased casualties and prolonged recovery times. Addressing these shortcomings is crucial to ensuring that all community members receive the support they need during emergencies.

### **Objective 3: Analyzing Gaps in Preparedness and the Presence and/or Implementation of Anticipatory Response Frameworks**

The analysis of anticipatory response frameworks revealed several weaknesses in their presence and implementation. While some frameworks existed at the national and regional levels, their coverage, implementation and impact were limited, particularly at the local level. During and in the aftermath of the 2022 floods, delays in activating response plans, inadequate community involvement, and poor coordination among stakeholders further undermined the effectiveness of these frameworks. Additionally, the lack of integration between anticipatory frameworks and long-term development planning limited their ability to contribute to sustained resilience. Strengthening these frameworks and ensuring their full and effective implementation is essential for improving disaster preparedness and response.

### **Recommendations**

Based on the findings of this evaluation, the following recommendations are proposed for Government departments, International Non-Governmental Organizations (INGO), Civil Society Organizations (CSO), UN & other donor agencies. These recommendations can enhance achievement of the outcomes envisaged under respective mandates.

#### **1. Strengthening Community Resilience:**

- Expand and enhance DRR training, particularly in remote and marginalized communities, ensuring that programs are practical, hands-on, and regularly updated.
- Prioritize the maintenance and upgrading of critical infrastructure, including flood defenses and drainage systems, and implement nature-based solutions to enhance resilience.
- Improve access to emergency resources by strategically pre-positioning supplies and developing localized contingency plans that involve all community members.

#### **2. Enhancing Governmental Support Structures:**

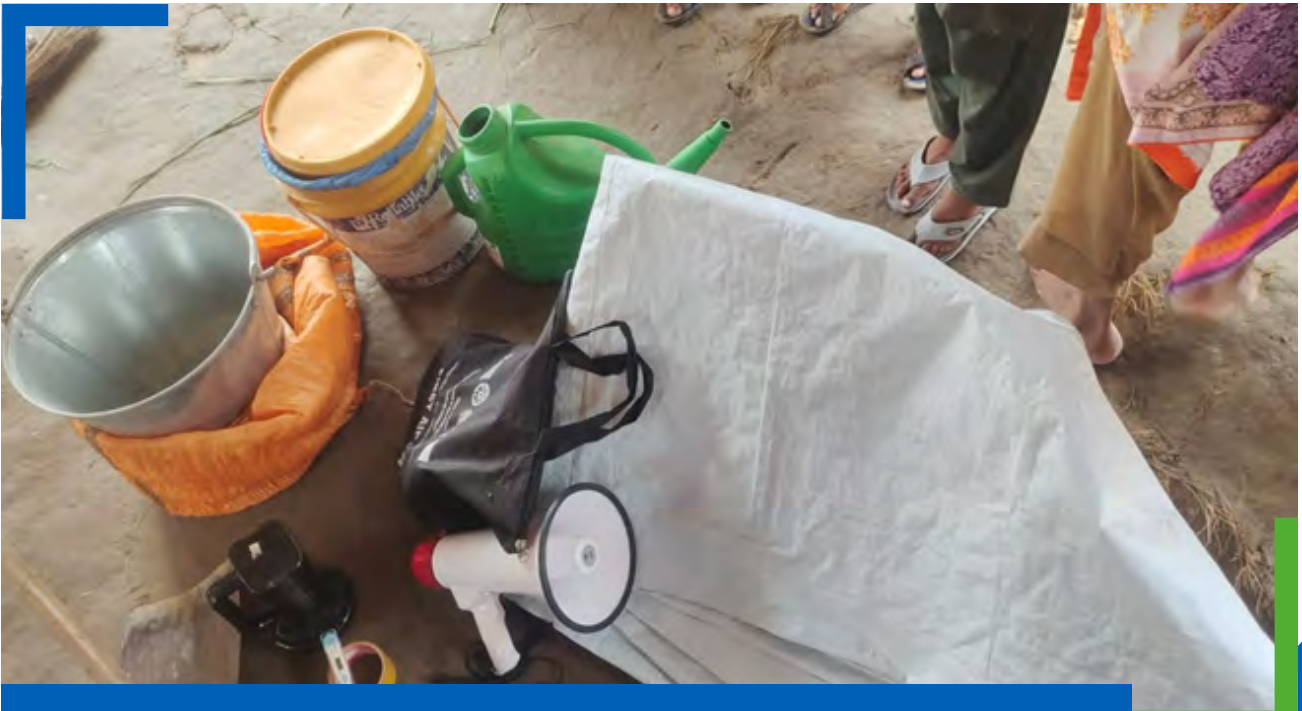
- Strengthen social protection systems to ensure that vulnerable populations have access to financial assistance and support during disasters. Simplify access to these benefits and integrate DRR principles into social protection programs.
- Foster better coordination among stakeholders by establishing centralized coordination mechanisms, developing joint response plans, and improving information sharing.
- Increase government investment in disaster preparedness, focusing on local governments' capacity to implement and sustain preparedness measures.

#### **3. Strengthening Anticipatory Response Frameworks:**

- Expand the coverage and reach of early warning systems, ensuring that warnings are clear, actionable, and accessible to all communities, including those in remote areas.
- Reduce bureaucratic delays and ensure the timely implementation of anticipatory measures, such as activating response plans and conducting regular disaster drills.
- Enhance community involvement and ownership of disaster preparedness efforts by involving local leaders in planning and empowering communities to take charge of their resilience-building activities.
- Integrate anticipatory frameworks with long-term development planning to address the root causes of vulnerability and build sustainable resilience.

#### **4. Cross-Cutting Recommendations:**

- Prioritize the needs of vulnerable populations by designing targeted interventions and strengthening protection mechanisms during emergencies.
- Foster continuous learning and adaptation by documenting lessons learned, sharing best practices, and promoting innovation in disaster risk management.
- Strengthen international cooperation and support, leveraging international expertise and resources to enhance local disaster preparedness capacities.



**Figure 2:** Emergency DRR Kit Provided by ACF (GLOW, August 2024)



## Section 1:

# Introduction

### 1.1 Contextual Background

Pakistan ranks as the tenth most disaster-prone country according to the World Risk Report 2022 and eighth in terms of being the most affected by climatic hazards from 2000 to 2019, according to the latest Climate Risk Index (2021). The country is vulnerable to a variety of hydro-meteorological and geologic hazards, particularly floods, earthquakes, cyclones and droughts. Extreme weather events have caused deaths, economic losses, and significant devastation to the lives and livelihoods of people, further contributing to the food insecurity of vulnerable populations.

The 2022 floods in Pakistan were particularly catastrophic, resulting in over 1,700 deaths and affecting /displacing more than 33 million people. Approximately 8 million people were displaced, and more than 2 million homes were destroyed or severely damaged. The floods also submerged over 4.4 million acres of agricultural land, leading to massive losses in crops and livestock, exacerbating food insecurity across the country. Economic losses were estimated at over \$30 billion, severely impacting Pakistan's economy and threatening the livelihoods of millions (OCHA<sup>1</sup>, 2023; World Bank<sup>2</sup>, 2023).

Climate change continues to exacerbate the frequency and intensity of these events, threatening the livelihoods, health, and economic stability of millions. The regions of Sindh and Balochistan are particularly susceptible, often bearing the brunt of these disasters.

**About Climate Resilient Project(s):** As climate change continues to increase the frequency and intensity of natural disasters, the livelihoods, health, and economic stability of millions are under threat. In response, numerous organizations, including Action Against Hunger-Pakistan, have been actively implementing projects aimed at enhancing the resilience of communities to better withstand and recover from these events.

However, despite this pressing need, there is a significant lack of empirical evidence on the effectiveness of the initiatives implemented in climate disaster-prone areas. This gap hinders the ability to inform future interventions, as it is unclear which measures have successfully enhanced people's capacity to cope through

<sup>1</sup>Pakistan Floods 2022: Lessons Learned and Recommendations. United Nations Office for the Coordination of Humanitarian Affairs.

<sup>2</sup>Mainstreaming Disaster Risk Reduction in Pakistan: A Multi-Sectoral Approach. Washington, DC: World Bank. (2023)

personal skills and climate-resilient infrastructure. Therefore, the current research study aims to evaluate the effectiveness & resilience of humanitarian response introduced in various areas of Sindh and Balochistan.

## 1.2 Overall Objectives and Research Questions

The following are the key assignment objectives and research questions:

**Objective 1: Validating the effectiveness of interventions aimed at increasing resilience against natural disasters, considering the 2022 floods.**

- 1.1 How effective were the implemented interventions in enhancing community resilience against the 2022 floods?
- 1.2 What specific outcomes were achieved through these interventions in terms of reducing vulnerability and improving adaptive capacity?
- 1.3 What are the key factors that contributed to or hindered the success of these interventions?

**Objective 2: Identifying persistent gaps within community capabilities and governmental support structures, including addressing critical humanitarian needs during emergencies.**

- 2.1 What are the critical gaps in community capabilities and governmental support structures that persisted during the 2022 floods?
- 2.2 How effectively were the critical humanitarian needs (health, nutrition, food security, social protection, WASH, and protection) addressed during the 2022 floods?
- 2.3 Which vulnerable segments of the community faced the most significant challenges during the emergency, and why?

**Objective 3: Analyzing gaps in preparedness and the presence and/or implementation of any anticipatory response framework at the government and other stakeholders' level.**

- 3.1 What were the primary gaps in disaster preparedness observed during the 2022 floods?
- 3.2 To what extent were anticipatory response frameworks present and implemented by the government and other stakeholders before and during the 2022 floods?
- 3.3 What are the key weaknesses in the existing anticipatory response frameworks that need to be addressed?

**Objective 4: Providing evidence-based recommendations, best practices, and lessons learned to stakeholders on enhancing disaster preparedness and response mechanisms.**

- 4.1 What best practices can be identified from the interventions and responses to the 2022 floods that could inform future disaster preparedness?
- 4.2 What lessons were learned regarding the coordination and effectiveness of disaster response mechanisms during the 2022 floods?
- 4.3 What evidence-based recommendations can be made to stakeholders to improve disaster preparedness and response for future natural disasters?





## Section 2:

# Approach and Methodology

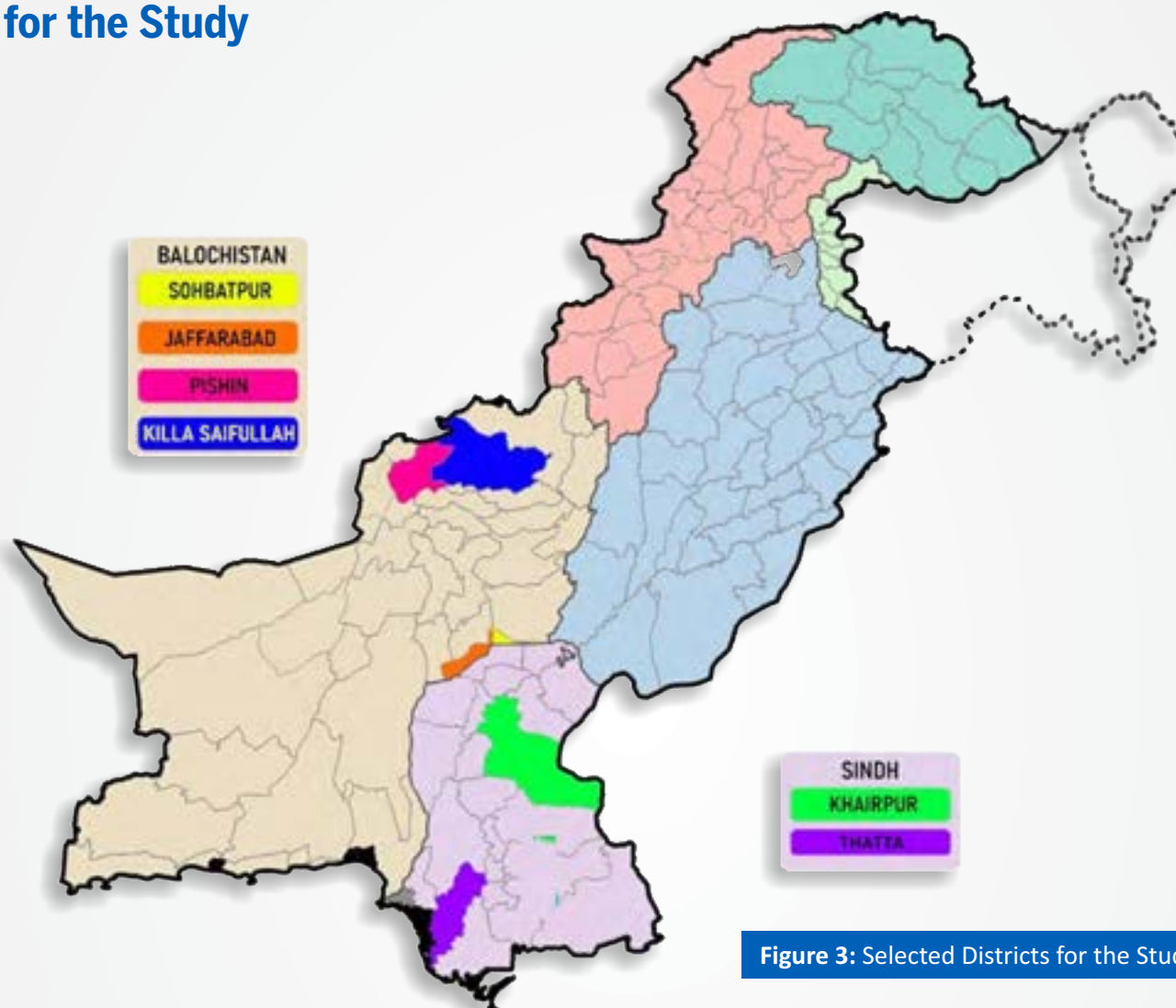
### 2.1 Geographical Focus

The study is conducted in the following six districts. A quick mapping of the activities is provided in table 1 below:

**Table 1: Study District, Activity and Donor**

S. No	Province	District	Activity	Donor
1	Sindh	Khairpur	Integrated – DRR (Cross cutting) FSL/WASH/Health & Nutrition	DEC
2	Sindh	Thatta	DRR	ECHO
3	Balochistan	Jaffer Abad	Integrated – DRR (Cross cutting) FSL/WASH/Health & Nutrition	DEC
4	Balochistan	Sohbat Pur	Integrated – DRR (Cross cutting) FSL/WASH/Health & Nutrition	DEC
5	Balochistan	Pishin	Health & Nutrition	SIDA/ECHO
6	Balochistan	Killa Saifullah	Health & Nutrition	SIDA/ECHO

## Selected Locations for the Study



**Figure 3:** Selected Districts for the Study

### 2.2 Approach

For conducting the research study on effectiveness & resilience of humanitarian response initiatives in Sindh and Balochistan, the study team used a comprehensive mixed-method and participatory approach. This approach involved collecting and analyzing both quantitative and qualitative data to formulate results, validate the effectiveness, identify the gaps in community capabilities and governmental support, analyse gaps in the preparedness of anticipatory approach, and propose evidence-based concrete recommendations.

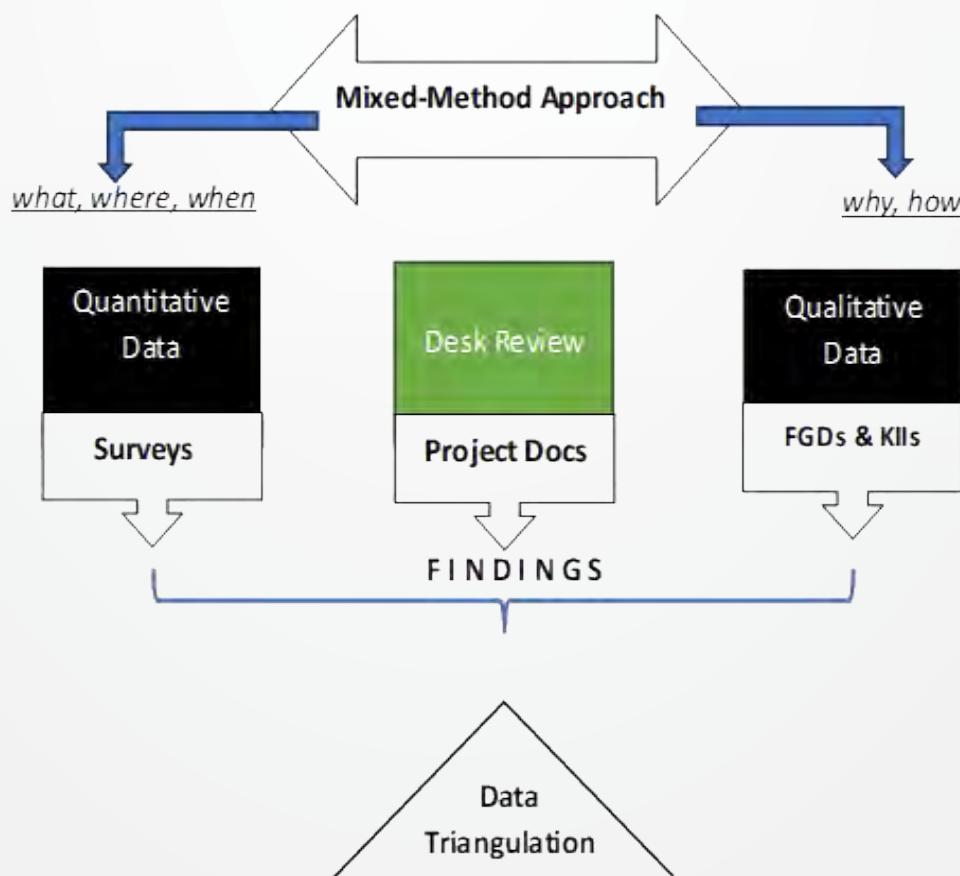
The **quantitative method** was used as a primary data source. It included conducting surveys with direct beneficiaries of humanitarian response interventions that helped in gathering the quantifiable data in the form of number and percentages putting a numerical value to the overall effectiveness of these interventions. The quantitative method aims to answer the 'what' questions of the study.

Whereas **qualitative method** collection involved engaging project stakeholders through methods such as Focus Group Discussions (FGDs), and Key Informant Interviews (KIIs). These stakeholders included government stakeholders, humanitarian actors (partners of DEC), and local leaders. The qualitative information not only provided richer insights into the quantitative findings but also helped in digging out the evidence-based recommendations by the experts. The qualitative approach aims to delve into the 'why and how' dimensions, offering a deeper understanding of the project's nuances for evaluation.

**Desk review of secondary data:** The desk study involved a thorough review of various documents, including project reports, monitoring and evaluation (M&E) reports, assessments, selection criteria, work plans, and other relevant materials. Through this comprehensive examination, the evaluation process follows a rubric encompassing key criterion.

Research Methods	Research Technique
<b>Qualitative Method</b>	<ul style="list-style-type: none"> <li>• Semi structured interviews (primary data),</li> <li>• Structured focus group discussions (primary data),</li> <li>• on-site observations (primary data)</li> </ul>
<b>Quantitative Method</b>	<ul style="list-style-type: none"> <li>• Household surveys (primary data) from the beneficiaries of the humanitarian response interventions</li> </ul>
<b>Secondary Data</b>	<ul style="list-style-type: none"> <li>• Desk review (secondary data)</li> </ul>

**Data Triangulation:** The evaluation team analyzed both quantitative and qualitative data along with desk review and triangulated them to generate evidence, to obtain key findings, draw conclusions and give recommendations. The methodological approach considered the triangulation of primary and secondary data and information and strived to fill eventual information gaps.



**Figure 4: Research Study Approach**



## 2.3 Methodology

GLOW team used a phased methodology which was divided the entire evaluation study into three distinctive phases as mentioned below:

- a) Inception Phase
- b) Field Phase
- c) Analysis and Reporting Phase



**Figure 5:** Research Phases and Activities

## 2.4 Study Sample

During the household survey, a total of 402 households were reached throughout the six study districts representing a statistical significance of 95% confidence and 5% margin of error as given in table 2.

District	Number	Percentage
Jafferabad	82	20.4
Khairpur	80	19.9
Killah Saifulah	60	14.9
Pishin	61	15.2
Sohbatpur	59	14.7
Thatta	60	14.9
Total	402	100.0

51.5% of all the respondents were women, as reflected in the table 3 below.

Gender	Number	Percentage
Male	195	48.5
Female	207	51.5
Total	402	100.0

Further, the team conducted 14 KIIs including DEC members, government representatives, and community leaders. The stakeholders comprised, but not limited to, project/field staff, local and national government representatives, the Provincial Disaster Management Authority (PDMA), District Disaster Management Authority (DDMA), the Health Department, NGOs/INGOs, community representatives and any other relevant stakeholder. The listed of KIIs are provided in table 4 below:

Table 4: KII Distribution	
Type of Stakeholders	Number
Government of Officials (including PDMA, Climate Change, Social Welfare, PHED etc)	8
ACF Staff	2
DEC	4
Total	14

The focus group discussions were conducted with the respondents disaggregated by gender in the selected locations. Keeping in view the overall framework, a total of 8-12 respondents participated in each focus group discussion, and the separate group discussions were organized for male and female respondents. The FGD duration was 60 to 90 minutes allowing collecting valuable feedback from the stakeholders. A total of 12 FGDs (2 in each district took place – 6 male and 6 female).

Prior to the start of the field work, The training of the field team took place where they were provided training on study protocols and tools. Kobo was used to collect data in the field whereas it was analysed in SPSS. All qualitative and quantitative data collected from the field for this assignment were validated and triangulated to ascertain emerging themes and trends.

In conducting this evaluation, the team upheld the highest ethical standards and ensured the protection of data and participants. All individuals involved, including flood affected population, refugees and host communities, were fully informed about the purpose, and nature of the assessment, and their voluntary participation was respected. Personal information was treated with utmost confidentiality and anonymity, with de-identification measures in place. Cultural sensitivity was prioritized throughout the data collection process, with careful attention to inclusivity, such as considering diverse groups and ensuring gender-specific considerations. This was achieved through measures such as employing local researchers familiar with cultural norms and adapting data collection tools to be culturally appropriate. Protection measures for vulnerable groups, such as persons with disabilities, were integrated into the assessment, including ensuring accessible communication methods and providing support as needed during the data collection process.

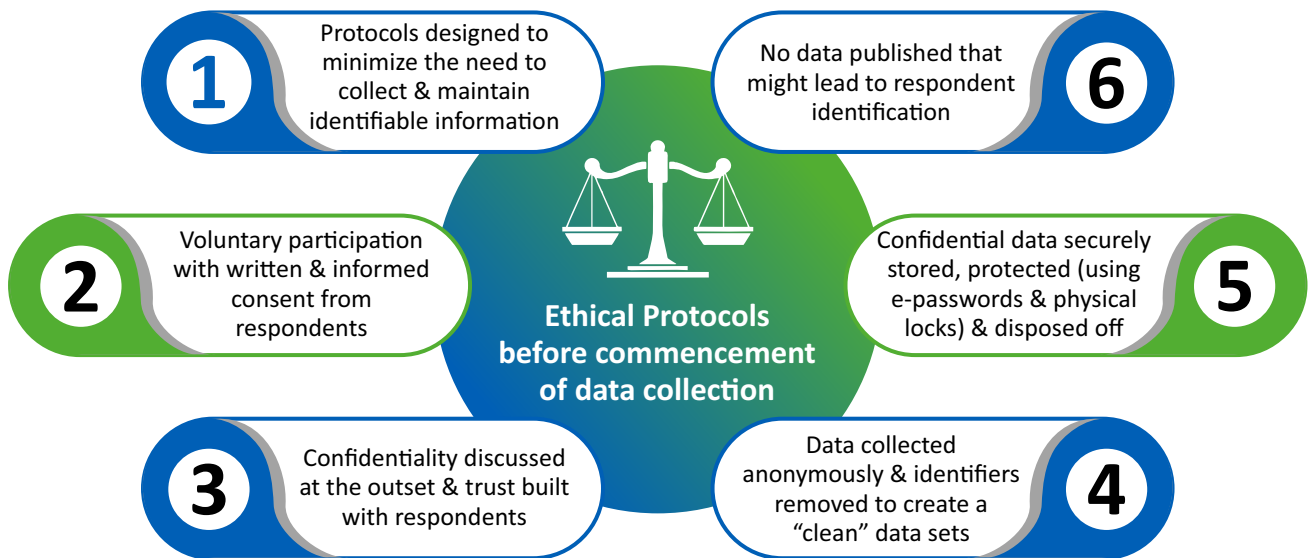


Figure 6: Ethical Protocols for this study





## Section 3:

# Key Findings

### 3.1 Literature Review: Disaster Resilience and Preparedness in Pakistan

Pakistan is highly vulnerable to natural disasters, particularly floods, earthquakes, and droughts, due to its diverse topography and climatic conditions. The 2022 floods, which devastated large parts of the country, underscored the need to evaluate the effectiveness of current interventions, identify persistent gaps in disaster preparedness, and provide evidence-based recommendations for enhancing resilience against future disasters. This literature review explores these areas, focusing on the effectiveness of interventions, gaps in community capabilities and governmental support structures, the presence of anticipatory response frameworks, and best practices for disaster preparedness.

#### 1. Effectiveness of Interventions in Enhancing Resilience

Resilience-building interventions in Pakistan have primarily focused on infrastructure development, early warning systems, and community-based disaster risk reduction (CBDRR) programs. Recent studies highlight the mixed effectiveness of these interventions. For instance, the National Disaster Risk Reduction Policy (2013) and subsequent National Disaster Management Plan (NDMP) (2015-2030) laid the foundation for resilience-building through structural and non-structural measures. However, the 2022 floods revealed significant shortcomings in these interventions. Research by Alam et al. (2023)<sup>3</sup> indicates that while early warning systems have improved, the dissemination of information to vulnerable communities remains inconsistent, limiting the effectiveness of these interventions. Moreover, a study by Malik and Ahmed (2023)<sup>4</sup> found that although infrastructure projects like flood embankments and drainage systems have been implemented, many were either poorly constructed or inadequately maintained, reducing their resilience-enhancing potential.

<sup>3</sup>Evaluating the Impact of Flood Mitigation Structures in Pakistan. *Journal of Disaster Risk Studies*

<sup>4</sup>Infrastructure Resilience in Flood-Prone Areas of Pakistan: An Assessment. *Disaster Science Review*

## 2. Gaps in Community Capabilities and Governmental Support Structures

The literature consistently identifies significant gaps in community capabilities and governmental support structures in Pakistan, particularly in the context of disaster response. A report by the International Federation of Red Cross and Red Crescent Societies (IFRC) (2022)<sup>5</sup> highlighted that despite substantial investments in disaster risk reduction, many communities lack the necessary skills, knowledge, and resources to effectively respond to emergencies. This gap is particularly pronounced in rural and remote areas where access to government services is limited. The 2022 floods further exposed these gaps. According to a UNICEF (2023)<sup>6</sup> report, health, nutrition, and WASH (Water, Sanitation, and Hygiene) services were severely disrupted, leaving vulnerable populations, especially women and children, at heightened risk. The lack of coordinated efforts between government agencies and non-governmental organizations (NGOs) also hampered the timely delivery of essential services, leading to a delayed and fragmented response.

## 3. Gaps in Preparedness and Anticipatory Response Frameworks

Preparedness for natural disasters in Pakistan has historically been reactive rather than proactive. The concept of anticipatory response frameworks, which involve forecasting potential disasters and taking preemptive action, is relatively new in Pakistan. A review of the Sendai Framework for Disaster Risk Reduction (2015-2030) implementation in Pakistan by Khan and Rahman (2022)<sup>7</sup> reveals that while the government has made strides in integrating disaster risk reduction into development planning, anticipatory frameworks remain underdeveloped. The 2022 floods demonstrated the absence of effective anticipatory response mechanisms. In Pakistan, anticipatory action is crucial for mitigating the impact of disasters on vulnerable communities, particularly in disaster-prone regions such as Sindh, Balochistan, and Khyber Pakhtunkhwa. One of the key components of anticipatory action is the availability of timely and flexible funding, enabling early interventions to reduce risks and prevent the worst impacts before a shock occurs or before acute impacts are felt. The Government of Pakistan has made strides in developing frameworks and mechanisms for disaster risk reduction and anticipatory action. The National Disaster Management Authority (NDMA) plays a pivotal role in coordinating preparedness and response efforts, including anticipatory actions. Moreover, the National Disaster Risk Management Framework (NDRMF) outlines the country's strategy for reducing disaster vulnerability, emphasizing early warning systems and preemptive actions. In addition, the Provincial Disaster Management Authorities (PDMAs) work in close collaboration with the NDMA to tailor anticipatory interventions based on local needs. Financial mechanisms are available to support these efforts, such as the National Disaster Risk Financing Strategy (NDRFS) and the Pakistan Resilience Partnership (PRP), which mobilizes both national and international resources to fund early action initiatives. Additionally, international donors and agencies such as the World Bank and the Asian Development Bank have supported Pakistan through various funding mechanisms aimed at enhancing disaster resilience and preparedness, including the provision of contingent financing for rapid response and early interventions. These structures, alongside ongoing donor-funded programs, have enhanced the government's capacity to implement anticipatory actions to mitigate and reduce disaster impacts. However, ensuring adequate and timely access to funding remains critical to the success of such initiatives. A report by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) (2023)<sup>8</sup> noted that although weather forecasts predicted the heavy monsoon rains, the lack of coordinated anticipatory actions, such as pre-evacuations or pre-positioning of relief supplies, significantly exacerbated the disaster's impact.

## 4. Best Practices, Lessons Learned, and Recommendations

The literature offers several insights into best practices and lessons learned from past disasters in Pakistan.

<sup>5</sup>Pakistan Floods 2022: Emergency Response Report. International Federation of Red Cross and Red Crescent Societies.

<sup>6</sup>Impact of the 2022 Floods on Health, Nutrition, and WASH in Pakistan. United Nations Children's Fund.

<sup>7</sup>Implementation of the Sendai Framework in Pakistan: Progress and Challenges. Asian Journal of Disaster Risk Reduction

<sup>8</sup>Pakistan Floods 2022: Lessons Learned and Recommendations. United Nations Office for the Coordination of Humanitarian Affairs.

For instance, community-based disaster risk management (CBDRM) programs have been highlighted as effective in building local capacities and fostering resilience. The Asian Development Bank (ADB) (2023)<sup>9</sup> points to successful examples in Khyber Pakhtunkhwa and Sindh, where community-led initiatives have reduced disaster risks and improved response times. However, the lessons from the 2022 floods emphasize the need for a more integrated and multi-sectoral approach to disaster preparedness. A study by World Bank (2023)<sup>10</sup> advocates for the mainstreaming of disaster risk reduction across all sectors, including health, education, and social protection. It also recommends the development of comprehensive anticipatory response frameworks that are informed by real-time data and include all stakeholders, from local communities to international organizations.

### 3.2 Validating the Effectiveness of Interventions

#### **Objective 1: Validating the effectiveness of interventions aimed at increasing resilience against natural disasters, considering the 2022 floods.**

- How effective were the implemented interventions in enhancing community resilience against the 2022 floods?
- What specific outcomes were achieved through these interventions in terms of reducing vulnerability and improving adaptive capacity?
- What are the key factors that contributed to or hindered the success of these interventions?

The interventions implemented by ACF in Sindh and Balochistan provinces were largely effective in enhancing community resilience against the 2022 floods. These interventions were comprehensive, targeting various aspects of community well-being, including infrastructure improvements, health and nutrition, food security, Water, Sanitation, and Hygiene (WASH), community-based disaster risk reduction (DRR) training, and the establishment of early warning systems. Together, these efforts contributed to a holistic approach that addressed both the immediate and long-term needs of the affected communities.

**Health and Nutrition:** The floods posed significant health risks, including the spread of waterborne diseases and malnutrition. ACF's interventions in health and nutrition were crucial in mitigating these risks. Mobile health clinics were deployed to provide immediate medical care, and nutrition programs targeted vulnerable groups, particularly children and pregnant women. These interventions significantly reduced the incidence of disease and malnutrition during and after the floods. A mother in Balochistan shared, "The health workers came to our village and treated our children. They also gave us advice on how to keep our families healthy during the floods." This proactive approach to health and nutrition helped prevent the outbreaks that often follow such disasters, ensuring that the community remained resilient in the face of the floods.

<sup>9</sup>Building Community Resilience through Disaster Risk Management in Pakistan. Asian Development Bank.

<sup>10</sup>Mainstreaming Disaster Risk Reduction in Pakistan: A Multi-Sectoral Approach. Washington, DC: World Bank.

Table 5 Assistance Received - Health and Nutrition		
Serial No.	Locations	Percentage %
1.	Khairpur	20.1
2.	Jaffarabad	20.3
3.	Sohbat Pur	14.5
4.	Pishin	15.5
5.	Killa Saifullah	14.8
6.	Mirpur Khas	14.8
7.	Total	100.0

The table 5 above illustrates the distribution of assistance in the health and nutrition sector across the following locations: Khairpur (20.1%), Jafferabad (20.3%), Sohbat Pur (14.5%), Pishin (15.5%), Killa Saifullah (14.8%), and Mirpur Khas (14.8%). While this distribution appears relatively even with some variation, it is important to highlight these rates correspond to the initial needs in each area, hence more focused on some areas as compared to others. Thus, effectiveness in this context hinges on the proportional needs of the affected populations in each region. For instance, areas such as Jafferabad and Khairpur, which received higher percentages of aid, were also more heavily impacted by the floods requiring immediate assistance. Conversely, regions like Sohbat Pur, receiving a lower proportion (14.5%), experienced the flood but fewer people were affected due to the district size. Similarly, water did not stay longer in Pishin and or Killa Saifullah due to its hilly terrain thus affecting fewer people.

**Food Security:** Ensuring food security was another critical component of ACF's interventions. The distribution of food rations and the provision of seeds and tools to farmers helped stabilize food supplies during and after the floods. In addition, ACF supported the establishment of community food banks, which provided a buffer against food shortages. A farmer from Sindh remarked, "With the seeds and tools provided by ACF, I was able to replant my crops quickly after the floods, ensuring that my family had enough to eat." These efforts not only addressed immediate food needs but also strengthened the community's capacity to recover and sustain their livelihoods post-disaster.

Table 6 Assistance Received -Food Security and Livelihoods		
Serial No.	Responses	Percentage %
1.	Khairpur	20.2
2.	Jaffarabad	20.7
3.	Sohbat Pur	14.4
4.	Pishin	44.7
5.	Total	100.0

The table 6 above shows the distribution of received assistance in food security and livelihoods varied by location: Khairpur (20.2%), Jaffarabad (20.7%), Sohbat Pur (14.4%), and Pishin (44.7%). Pishin's larger share of assistance reflects the fact this district faced more severe impacts in terms of agricultural losses, and livelihood disruptions compared to the other areas – as highlighted by loss of fruit orchards. Pishin is an agriculturally dependent district, and the floods likely devastated fruit trees, livestock, and essential

livelihood assets, resulting in a greater need for food security and livelihood support. In districts like Khairpur and Jaffarabad, the focus was also on other sectors like WASH, even though agriculture was severely affected in the district.

**Infrastructure Improvements:** ACF focused on enhancing physical infrastructure as a fundamental part of its resilience-building strategy. This included the construction of flood-resistant shelters, reinforced embankments, and improved drainage systems, which were crucial in reducing the physical impact of the floods. The construction of elevated water points in flood-prone areas ensured access to safe drinking water, even during the floods. As a community leader in Sindh highlighted, "The new shelters and water points built by ACF withstood the floods, and we were able to avoid the severe damage that we experienced in previous years." These improvements not only provided immediate protection but also contributed to the community's sense of security and preparedness.

Table 7 Disaster-Resilient Infrastructure in Community		
Serial No.	Responses	Percentage %
1.	Yes	30.8
2.	Partially Yes	48.7
3.	No	19.2
4.	Not Applicable	1.3
5.	Total	100.0

The table 7 above shows that 30.8% of respondents said their community had disaster-resilient infrastructure, 48.7% said it was partially disaster-resilient, 19.2% said it was not, and 1.3% said it was not applicable. This indicates varying levels of infrastructure resilience in the community. These figures provide important insights into both the effectiveness of flood mitigation measures and the gaps that remain in ensuring comprehensive protection for vulnerable communities. The 30.8% of communities with disaster-resilient infrastructure benefited from post-flood investments in flood defenses, drainage systems, and resilient housing and road construction. This group is likely to experience fewer damages during the future floods, demonstrating that infrastructure investments can be effective in mitigating the worst impacts of such disasters. These communities are likely to be better able to withstand the immediate shocks and recover more quickly, reflecting the value of anticipatory actions and long-term disaster risk reduction efforts. However, the fact that 48.7% of respondents described their infrastructure as only "partially disaster-resilient" suggests that while some measures are in place, they are insufficient to fully protect against the severity of the future floods. In these cases, infrastructure may have included flood defenses or improved drainage, but these systems will either overwhelmed by the sheer volume of floodwater or will not cover all areas of the community adequately. This partial resilience will result in moderate to severe damage to homes, roads, and public services, prolonging recovery times and straining resources. Improving these systems, either through upgrading existing defenses or expanding coverage to more vulnerable areas, that would be critical for reducing future disaster impacts.

The 19.2% of respondents who reported having no disaster-resilient infrastructure point to a significant vulnerability in certain communities. These areas are likely the hardest hit by the floods, with homes, roads, and essential services suffering extensive damage. The lack of infrastructure resilience not only exacerbated the immediate impacts of the disaster but also hamper the community's ability to recover in the aftermath. These communities are in urgent need of targeted investments in infrastructure, particularly focusing on flood defenses, improved building codes, and access to early warning systems to prevent future disasters from causing similar devastation.



The 1.3% of respondents for whom the question was not applicable may represent communities that lack awareness of the need for disaster-resilient infrastructure. This group highlights the need for further education and preparedness programs to ensure all communities, regardless of their perceived risk level, understand the importance of disaster resilience and take steps to protect themselves.

Table 8 Upgrades to Infrastructure for Disaster Resilience		
Serial No.	Responses	Percentage %
1.	Yes	28.5
2.	Partially Yes	47.2
3.	No	23.3
4.	Not Applicable	1.0
5.	Total	100.0

The data in table 8 above indicates that 28.5% of respondents reported full infrastructure upgrades in their communities, 47.2% reported partial upgrades, 23.3% stated there were no upgrades, and 1.0% found the question not applicable, highlights a varied landscape of disaster preparedness and resilience-building efforts. The 28.5% of communities that reported making upgrades to critical infrastructure such as schools, health facilities, and water systems likely reflect successful disaster risk reduction initiatives. These improvements, such as reinforcing roofs, constructing flood barriers, or strengthening buildings to withstand natural hazards, play a crucial role in enhancing community resilience. For example, flood barriers and elevated water facilities can prevent contamination and ensure continuity of services, while fortified school structures can serve as emergency shelters during disasters. These upgrades suggest that a portion of the population has benefitted from targeted investment and interventions, which likely reduced the impact of the future floods on public services and infrastructure in those areas. However, the 47.2% who reported partial upgrades suggest that while some measures have been put in place, they may not be comprehensive or sufficient to fully protect against the severity of future disasters like the 2022 floods. Partial upgrades could mean that only certain buildings or areas of the community have been reinforced, leaving others vulnerable. For instance, if schools or health centers have been upgraded but water facilities have not, the community may still face critical challenges, such as waterborne diseases or reduced access to clean water during floods. These partial measures may reduce damage in some areas but will likely leave gaps in disaster resilience, requiring further investment to fully upgrade essential services.

The 23.3% of respondents indicating that no upgrades have been made to their infrastructure is concerning, as it points to significant vulnerabilities in those communities. These areas are likely to have experienced the most severe impacts from the 2022 floods, as unreinforced infrastructure is prone to collapse or damage, further disrupting the lives of affected populations. The absence of upgrades could be due to a lack of resources, geographic isolation, or lower prioritization in resilience-building efforts. These communities urgently require focused attention, not only to repair the damage caused by the floods but also to implement long-term solutions that will safeguard them from future hazards. Finally, the 1.0% of respondents for whom the question was not applicable likely represent communities that either do not rely on formal infrastructure. This small percentage may highlight a gap in outreach or awareness in certain communities about the importance of disaster-resilient infrastructure. Addressing these knowledge gaps through awareness campaigns and preparedness programs could further enhance resilience.

Overall, the mixed levels of infrastructure improvement reflect both progress and ongoing challenges in preparing for disasters in Pakistan. While nearly 75% of respondents reported some level of infrastructure upgrade, the significant proportion of communities with partial or no upgrades suggests there is still much

work to be done to ensure comprehensive disaster resilience. Ensuring that future interventions focus on fully upgrading infrastructure in the most vulnerable areas will be critical to reducing the risks posed by future disasters and ensuring continuity of services during and after emergencies.

**Table 9 Functionality of Public Infrastructure During Disasters**

Serial No.	Responses	Percentage %
1.	Yes	24.6
2.	Partially Yes	49.5
3.	No	24.4
4.	Not Applicable	1.5
5.	Tota	100.0

The table 9 above shows that 24.6% of respondents believe public infrastructure would continue to function during natural disasters, 49.5% believe it would function partially, 24.4% think it would not function, and 1.5% find the question not applicable, highlights mixed levels of confidence in the resilience of public infrastructure during disasters.

The 24.6% of respondents who believe public infrastructure will remain functional during disasters reside in areas where investments have been made in disaster-resilient facilities and systems. These respondents may have confidence in their local schools, health centers, roads, and water systems because of visible reinforcements or upgrades made to withstand natural hazards. For example, flood-resistant roads or well-reinforced health centers that continue to operate during floods or storms can build trust within the community, contributing to this positive outlook. This group will likely experienced fewer disruptions during floods, reflecting the effectiveness of resilience-building measures. On the other hand, the fact that nearly half (49.5%) of respondents believe public infrastructure would function only partially indicates that many communities have infrastructure that is not fully equipped to handle the impacts of disasters. Partial functionality may mean that while some services, such as water supply or electricity, continue to operate, others may be disrupted or significantly reduced. For example, roads may become impassable during floods, isolating certain areas, or schools may sustain damage that prevents them from serving as shelters. This partial functionality points to existing gaps in disaster preparedness that need to be addressed to ensure critical services can continue operating during emergencies.

The 24.4% who believe that public infrastructure would not function at all during natural disasters highlight significant vulnerabilities in some communities. These respondents also likely experienced severe disruptions during the 2022 floods, with key services such as health facilities, schools, and roads becoming inoperative due to insufficient preparation or resilience measures. For these communities, the complete failure of public infrastructure can have devastating effects, further exacerbating the impacts of disasters by hindering access to essential services and delaying recovery efforts. This lack of confidence points to an urgent need for infrastructure investment and disaster risk reduction strategies that prioritize these high-risk areas. The 1.5% of respondents for whom the question was not applicable may reflect communities that do not rely heavily on public infrastructure. However, it could also indicate a lack of awareness about the importance of resilient infrastructure in disaster response, suggesting the need for increased education and community engagement on the subject.

Overall, the varied confidence levels in the functionality of public infrastructure during disasters highlight both progress and ongoing challenges in building disaster resilience in Pakistan. While some communities

benefit from robust infrastructure, a significant proportion remains only partially protected, and many are highly vulnerable to infrastructure failure during disasters. To address this, future disaster response efforts should focus on strengthening and upgrading public infrastructure in areas where confidence is low, ensuring that critical services can continue to operate during emergencies and supporting communities in building long-term resilience to natural disasters.

Table 10 Functionality of Public Infrastructure After Disasters		
Serial No.	Responses	Percentage %
1.	Yes	27.7
2.	Partially Yes	39.7
3.	No	30.8
4.	Not Applicable	1.8
5.	Total	100.0

The table 10 above shows as how respondents perceive the functionality of public infrastructure after a natural disaster provides important insights into community expectations for post-disaster recovery. The results show that 27.7% of respondents believe that most public infrastructure-such as schools, health facilities, and water systems-will be fully functional within a week, while 39.7% expect partial functionality. However, 30.8% of respondents doubt that the infrastructure will be functional at all, and 1.8% find this question not applicable.

The 27.7% who believe that infrastructure will be fully operational within a week likely have confidence in their community's disaster preparedness and response capabilities. These respondents may have witnessed or benefited from past investments in resilient infrastructure, such as flood-proof schools, water facilities with backup systems, or health centers equipped to handle emergencies. For these communities, early recovery is seen as achievable, with minimal disruption to essential services. This could be due to the presence of well-maintained infrastructure or effective local disaster response plans that prioritize the quick restoration of services.

On the other hand, the 39.7% who believe infrastructure will only be partially functional within a week reflect a more cautious optimism. These respondents may anticipate that while some services will be restored promptly, others may take longer to recover. For example, roads or water supply systems might be repaired more quickly than schools or health facilities, which could require more time and resources for rehabilitation. This group's expectations suggest that partial recovery is often the reality in many communities, where some services remain disrupted, prolonging the recovery process.

The 30.8% of respondents who doubt that public infrastructure will be functional at all after a disaster highlight significant vulnerabilities. These individuals likely live in areas where infrastructure is fragile, poorly maintained, or has been severely damaged in previous disasters. For these communities, the lack of functionality in key public services, such as health centers and water systems, can exacerbate the negative impacts of the disaster and delay recovery efforts. Their doubts may stem from past experiences where infrastructure failed to recover in a timely manner, leaving communities without essential services for extended periods.

The 1.8% who find the question not applicable may represent communities that either do not rely heavily on public infrastructure or have limited exposure to natural disasters. This group may also lack sufficient knowledge or experience to assess how quickly public infrastructure can recover after a disaster, pointing to potential gaps in awareness of disaster preparedness and resilience strategies.

Overall, these varied perceptions highlight the uneven levels of infrastructure resilience across different regions in Pakistan. While some communities express confidence in the rapid recovery of public infrastructure, a significant proportion of the population remains uncertain or pessimistic about the functionality of essential services after a disaster. This underscores the need for targeted investments in strengthening public infrastructure, particularly in vulnerable areas where expectations for post-disaster recovery are low. Ensuring that schools, health facilities, and water systems can recover quickly and operate effectively in the aftermath of natural disasters will be crucial for improving disaster resilience and supporting long-term community recovery.

**Water, Sanitation, and Hygiene (WASH):** The WASH interventions were vital in preventing the spread of waterborne diseases, which are common after flooding. ACF's efforts included the distribution of water purification tablets, the construction of latrines, and hygiene promotion campaigns. These interventions ensured that communities had access to clean water and sanitation facilities, even during the height of the floods. A woman from Sindh emphasized, "ACF taught us how to purify our water and provided us with awareness. This kept our families safe from diseases." The success of these WASH interventions was evident in the significant reduction in the incidence of diarrheal diseases reported by local health clinics.

**Table 11 Water Boiling Practices Post-Awareness Campaigns**

Serial No.	Responses	Percentage %
1.	Yes, always	62.8
2.	Sometimes	22.6
3.	No, never	14.7
4.	Total	100.0

The table 11 shows a majority (62.8%) of respondents have adopted the practice of boiling water regularly, 22.6% only do so occasionally, and 14.7% do not boil water at all. This suggests that the awareness campaigns have had a positive impact on promoting safe water practices, though there remains a significant portion of the population that either lacks consistent access to safe water or has not fully internalized the importance of boiling water. Before the 2022 floods, the situation regarding access to safe drinking water and hygiene practices in Pakistan was already challenging, particularly in rural and underserved areas. Communities in flood-prone regions, such as Sindh and Balochistan, faced persistent issues with access to clean water due to underdeveloped water infrastructure, limited access to sanitation facilities, and contamination of water sources. In many areas, households relied on untreated groundwater or surface water, which increased the risk of waterborne diseases such as diarrhea and cholera. The data from table 11, showing that 62.8% of respondents regularly boil water, suggests that awareness campaigns and public health interventions post-floods had made progress in promoting safe water practices. This high percentage indicates that many households had internalized the importance of boiling water as a means to prevent disease, particularly in areas where access to clean water was unreliable. However, the fact that 22.6% only boil water occasionally and 14.7% do not boil water at all points to remaining gaps in consistent adoption of this practice, either due to lack of resources (such as fuel for boiling) or inconsistent messaging from awareness campaigns.

These figures suggest that while a significant portion of the population had embraced safe water practices post-floods, there was still a substantial minority that had not fully adopted these practices. This could have been exacerbated by infrastructural challenges, social behaviors, or limited outreach in some regions. After the floods, these disparities may have become even more pronounced, with access to clean water becoming more difficult due to contamination and damage to water supply systems. For those who were already

inconsistent in boiling water, the flooding likely intensified their vulnerability to waterborne diseases, underscoring the need for renewed focus on hygiene education and safe water access during the recovery phase.

In summary, while progress was being made post-floods in promoting safe water practices through awareness campaigns, a significant portion of the population was still at risk due to inconsistent access to clean water and gaps in behavior change. This uneven adoption of boiling water practices highlights the ongoing need for targeted interventions to ensure all communities can access and practice safe water consumption, particularly in the aftermath of major disasters like the 2022 floods.

**Table 12 Handwashing Practices**

Serial No.	Responses	Percentage %
1.	Yes, always	81.2
2.	Sometimes	18.8
3.	Total	100.0

The table 12 shows that most respondents (81.2%) reported always washing their hands with soap, indicating strong adherence to hygiene practices. However, 18.8% wash their hands only sometimes, which suggests that while awareness of proper hygiene is generally high, there are still gaps in consistent practice. The data from table 12, which indicates that 81.2% of respondents always wash their hands with soap, reflects a strong adherence to proper hygiene practices across the majority of the population. This suggests that hygiene awareness campaigns and interventions promoting handwashing as a key preventive measure against disease have had a positive impact, especially in light of public health crises such as the 2022 floods and COVID-19 pandemic, which likely reinforced the importance of regular handwashing.

However, the 18.8% of respondents who reported only washing their hands sometimes points to gaps in the consistent adoption of this critical hygiene behavior. This inconsistency may be due to several factors, including limited access to soap and water, cultural or social behaviors, or a lack of understanding of the full importance of hand hygiene in preventing illness, particularly in rural or marginalized communities. After the 2022 floods, the importance of consistent handwashing became even more pronounced. Floodwaters often lead to widespread contamination of water sources and poor sanitation conditions, increasing the risk of waterborne diseases. In such conditions, even occasional lapses in hand hygiene can significantly increase vulnerability to illness, particularly among children and other high-risk groups.

To address these gaps, post-flood recovery efforts should focus on ensuring that all communities have reliable access to soap and water, alongside continuing education campaigns that emphasize the importance of handwashing, especially in the wake of natural disasters. By reinforcing these hygiene behaviors and addressing barriers to consistent practice, the health impacts of floods and other emergencies can be better mitigated.

**Table 13 Difficulty with Self-Care (Washing or Dressing)**

Serial No.	Responses	Percentage %
1.	No difficulty	45.0
2.	Yes, some difficulty	50.0
3.	Yes, a lot of difficulty	5.0
4.	Total	100.0

The table 13 shows above for self-care tasks like washing or dressing, 45.0% of respondents reported no difficulty, whereas 50.0% experienced some difficulty. A small segment, 5.0%, reported a lot of difficulty. This suggests that most people can manage self-care, but a considerable number face challenges in performing these daily activities. The data from the table 13 indicates that while 45.0% of respondents reported no difficulty with self-care tasks such as washing or dressing, 50.0% experienced some difficulty, and 5.0% reported significant difficulty. This suggests that while most individuals are able to manage self-care independently, a substantial portion of the population faces challenges in performing these everyday tasks. These difficulties could stem from various factors, including physical disabilities, the effects of aging, or chronic health conditions.

It's important to consider whether these challenges are primarily due to disabilities or influenced by external factors. For example, those who experience "some difficulty" might not necessarily have permanent disabilities but could be dealing with temporary conditions, such as injuries, or the physical strain caused by the aftermath of the 2022 floods. The floods may have exacerbated physical health issues, limited access to healthcare, or created difficult living conditions, such as lack of clean water or shelter, making self-care tasks harder to manage.

For the 5.0% who reported "a lot of difficulty," it's likely that this group includes individuals with more serious or permanent disabilities, such as mobility impairments, visual impairments, or cognitive disabilities, which make daily tasks significantly more challenging. In such cases, external factors like lack of access to assistive devices, insufficient caregiving support, or inaccessible infrastructure may further contribute to their difficulties.

In both groups—those with some or a lot of difficulty—external factors such as environmental damage from the floods, disrupted access to clean water and sanitation, or insufficient healthcare services likely play a role in complicating self-care tasks. These factors need to be taken into account when addressing the needs of people facing self-care challenges, as providing better access to resources, support, and infrastructure can significantly improve their ability to manage these daily activities independently.

Overall, while disabilities may explain some of the difficulties reported, external factors, especially those related to the post-flood conditions, also play a crucial role in shaping how people experience self-care challenges.

**Community-Based Disaster Risk Reduction (DRR) Training:** The DRR training programs were central to enhancing community resilience. These programs empowered local communities with the knowledge and skills needed to respond effectively to natural disasters. Training covered emergency preparedness, first aid, and safe evacuation procedures, with a focus on integrating health, nutrition, food security, and WASH into disaster response plans. A resident from Balochistan stated, "Before the floods, we didn't know what to do, but now we have plans in place, and we know how to protect ourselves, our health, and our food supplies." This comprehensive approach ensured that communities were better prepared to safeguard their well-being during the floods.

**Table 14 Community Disaster Preparedness Plan**

Serial No.	Responses	Percentage %
1.	Yes	61.3
2.	No	38.7
3.	Total	100.0

The table 14 above shows that 61.3% of respondents reported that their community had a disaster preparedness plan, while 38.7% said it did not. This indicates that a majority of communities have a plan in place for disaster preparedness. The data showing that 61.3% of respondents reported their community had a disaster preparedness plan, while 38.7% indicated they did not, suggests a positive trend toward preparedness in many areas. However, the fact that nearly 40% of communities lack such plans highlights critical gaps that could hinder effective response and recovery during disasters.

For the 61.3% of communities with a disaster preparedness plan, this likely reflects efforts by local governments, NGOs, and international agencies to improve disaster readiness through community-based disaster risk management programs. These plans often include early warning systems, evacuation protocols, stockpiling of essential supplies, and training on disaster response. Communities with preparedness plans are better positioned to respond effectively to crises, minimizing damage and reducing loss of life during events like floods, earthquakes, or extreme weather.

However, the 38.7% of communities without a disaster preparedness plan raises concerns, especially in a country like Pakistan, which is highly vulnerable to natural disasters. This lack of planning could stem from limited resources, inadequate awareness of disaster risks, or geographic isolation. Without proper preparedness measures in place, these communities are at higher risk of facing severe consequences during disasters, including delayed response times, greater loss of life, and more prolonged recovery periods.

This disparity in preparedness underscores the need for targeted interventions to ensure that all communities, especially those most vulnerable to disasters, have access to disaster planning resources and are actively involved in preparedness activities. Enhancing community capacity through training, infrastructure improvements, and collaboration with local authorities will be key to bridging this gap and ensuring more equitable disaster resilience across the country.

Table 15 Participation in Disaster Preparedness Training Related to Climate Change		
Serial No.	Responses	Percentage %
1.	Yes	64.1
2.	No	35.9
3.	Total	100.0

The table 15 above shows that 64.1% of respondents had participated in disaster preparedness training related to climate change, while 35.9% had not. This demonstrates a significant level of involvement in disaster preparedness training. The data showing that 64.1% of respondents had participated in disaster preparedness training related to climate change, while 35.9% had not, indicates a significant level of community engagement in disaster readiness initiatives. This majority participation suggests that efforts to build awareness and capacity around climate-related disasters are reaching a substantial portion of the population, likely contributing to improved preparedness in areas vulnerable to floods, heatwaves, and other climate-related hazards.

The fact that over 60% of respondents have received training indicates progress in the implementation of programs aimed at increasing community resilience to climate change impacts. These training sessions may include education on early warning systems, response strategies, and long-term adaptation measures such as sustainable agricultural practices or water conservation techniques. The high participation rate reflects the growing recognition of climate change as a critical factor in disaster risk and the importance of equipping communities with the knowledge and skills to protect themselves.

However, the 35.9% who have not participated in disaster preparedness training highlights a gap that needs attention. This group may include communities that are more remote, have less access to such programs, or are otherwise marginalized from disaster preparedness efforts. Ensuring that these populations are included in future training is essential for reducing their vulnerability to the increasing frequency and severity of climate-related disasters.

Addressing this gap would require outreach and tailored programs to engage those who have not yet been reached, ensuring that disaster preparedness and climate change adaptation measures are more evenly distributed across all communities. By expanding training opportunities, more individuals can be empowered to take proactive steps in safeguarding their communities from the evolving threats posed by climate change.

**Table 16 Participation in Community Disaster Drills or Simulations**

Serial No.	Responses	Percentage %
1.	Yes	66.2
2.	No	33.8
3.	Total	100.0

The table 16 above shows that 66.2% of respondents had participated in community disaster drills or simulations, while 33.8% had not. This shows a high level of engagement in practical disaster preparedness activities. The data showing that 66.2% of respondents had participated in community disaster drills or simulations, while 33.8% had not, reflects a high level of community involvement in practical disaster preparedness activities. Disaster drills and simulations are crucial components of preparedness, as they provide hands-on experience in responding to emergency scenarios, such as floods, earthquakes, or other natural disasters. This level of participation suggests that many communities are actively engaged in learning how to respond effectively when disasters strike, enhancing their resilience and ability to minimize loss and damage.

For the majority of respondents who have taken part in these drills, this indicates that local authorities, NGOs, or other organizations are successfully implementing preparedness programs that emphasize not just theoretical knowledge, but practical application. These exercises often involve coordination between community members, local disaster management teams, and first responders, ensuring that participants are familiar with evacuation routes, safety procedures, and communication protocols. Regular drills can lead to quicker, more organized responses, potentially saving lives and reducing the impact of disasters.

However, the 33.8% of respondents who have not participated in disaster drills points to areas where engagement is still lacking. This group may represent communities that are harder to reach or where disaster risk awareness is lower. Alternatively, there could be logistical barriers, such as a lack of resources or infrastructure, preventing these drills from being conducted in certain areas. Addressing this gap is critical, as communities that have not engaged in practical preparedness activities may be more vulnerable when disasters occur.

To improve overall disaster readiness, efforts should focus on ensuring broader participation in community drills, particularly in areas with historically lower engagement. This could involve expanding outreach efforts, tailoring drills to local needs, and making them more accessible to marginalized or isolated communities. By increasing the reach and inclusivity of disaster preparedness exercises, a greater portion of the population can be equipped to respond effectively to emergencies, further strengthening the overall disaster resilience of the country.



**Table 17 Awareness of Community Risk Mitigation Initiatives**

Serial No.	Responses	Percentage %
1.	Yes	68.7
2.	No	31.3
3.	Total	100.0

This table 17 presents data on awareness of community initiatives aimed at risk mitigation. 68.7% of respondents are aware of such initiatives, while 31.3% are not. This suggests that most respondents are informed about community efforts to address and mitigate risks, though a notable minority is unaware. The data showing that 68.7% of respondents are aware of community initiatives aimed at risk mitigation, while 31.3% are not, highlights a generally strong level of awareness of local efforts to address and reduce disaster risks. This majority indicates that a significant portion of the population is informed about ongoing activities in their communities, such as early warning systems, flood defenses, or climate adaptation projects. These initiatives may include programs focused on building more resilient infrastructure, promoting sustainable livelihoods, or enhancing emergency response capacity, all of which are essential to mitigating the impacts of disasters.

The 68.7% awareness rate suggests that communication and outreach efforts by local authorities, NGOs, or disaster management agencies are effective in reaching a large portion of the community. Informed communities are more likely to engage in proactive risk mitigation behaviors, such as preparing emergency supplies, securing their homes, or participating in disaster preparedness training and drills. This awareness can contribute significantly to a community's overall resilience, as people who understand the risks and available initiatives are better equipped to respond to and recover from disasters.

However, the fact that 31.3% of respondents are unaware of these community initiatives is concerning, as it reflects a notable gap in engagement and outreach. This group may include marginalized, rural, or hard-to-reach populations who are not being sufficiently informed about the efforts to reduce disaster risks in their areas. Lack of awareness could hinder their ability to participate in risk reduction activities, leaving them more vulnerable to the effects of disasters.

To address this gap, targeted efforts are needed to increase awareness, especially among those who remain uninformed. This might involve enhancing communication strategies through local media, community meetings, or partnerships with local leaders to ensure that everyone is aware of the initiatives available to them. By ensuring that all community members are informed and engaged in risk mitigation efforts, the overall disaster resilience of these communities can be further strengthened.

**Table 18 Participation in Community Disaster Preparedness Groups**

Serial No.	Responses	Percentage %
1.	Yes	65.4
2.	No	34.6
3.	Total	100.0

This table 18 indicates whether respondents are part of community or neighborhood groups dedicated to disaster preparedness. 65.4% of respondents participate in such groups, while 34.6% do not. This highlights a strong level of community engagement in disaster preparedness, with over half of the respondents actively involved. The data showing that 65.4% of respondents participate in community or neighborhood groups

dedicated to disaster preparedness, while 34.6% do not, reflects a strong level of community engagement in disaster resilience efforts. The majority participation in these groups suggests that many communities recognize the importance of collective action in preparing for and responding to disasters. Participation in such groups typically involves sharing information, coordinating preparedness activities, organizing resources, and planning for emergency situations. These collaborative efforts are critical in building community resilience, as they ensure that individuals are not only prepared individually but can also rely on each other during times of crisis. The active involvement of 65.4% of respondents indicates that local disaster preparedness initiatives are resonating with many people, who are willing to commit their time and resources to these efforts. These groups often serve as a platform for organizing disaster drills, sharing early warning information, and mobilizing community resources for a coordinated response. By participating, individuals become more informed, better prepared, and more connected to their neighbors, which can significantly improve their capacity to handle emergencies.

However, the 34.6% who do not participate in these groups represent a sizable portion of the population that may be missing out on these benefits. This non-participation could be due to a variety of factors, including lack of awareness, limited access to such groups in rural or marginalized communities, or simply a lack of interest or time. For those who are not engaged, the absence of involvement in community preparedness activities may limit their knowledge of available resources or best practices, leaving them more vulnerable during a disaster.

To improve overall disaster preparedness, efforts should focus on increasing participation in these community groups, especially in areas where engagement is lower. This could be done by making these groups more accessible, promoting the benefits of participation more widely, and addressing barriers to involvement, such as scheduling or transportation issues. By expanding the reach and inclusivity of disaster preparedness groups, communities can further strengthen their collective capacity to respond effectively to emergencies and reduce the risks posed by future disasters.

Table 19 Preparedness for Climate-Related Disasters		
Serial No.	Responses	Percentage %
1.	Very likely	16.7
2.	Somewhat likely	57.7
3.	Not likely	21.8
4.	Unsure	3.8
5.	Total	100.0

The table 19 reflects how prepared respondents feel their households are to handle a climate-related disaster. 16.7% feel very prepared, 57.7% somewhat prepared, 21.8% not prepared, and 3.8% are unsure. This indicates a mixed level of preparedness, with a majority feeling somewhat ready but fewer feeling very prepared. The data showing that 16.7% of respondents feel very prepared, 57.7% feel somewhat prepared, 21.8% feel not prepared, and 3.8% are unsure about their household's ability to handle a climate-related disaster reflects a mixed level of disaster preparedness across households. While a majority (57.7%) feel somewhat prepared, indicating some level of readiness, the lower percentage of those who feel very prepared (16.7%) suggests that many households may not have fully implemented all the necessary measures to effectively cope with a major disaster.

The fact that only a small portion of respondents (16.7%) feel very prepared may reflect gaps in comprehensive disaster planning, such as securing adequate emergency supplies, having an evacuation plan, or safeguarding important assets. Households that feel very prepared are likely to have invested more time and resources in mitigating risks, which may include structural improvements to their homes, participating in preparedness training, or having clear communication plans in place for emergencies.

The majority of respondents (57.7%) who feel somewhat prepared likely have taken some steps toward readiness, such as having basic emergency supplies or awareness of early warning systems, but may lack full confidence in their ability to handle a disaster effectively. This sense of partial preparedness could stem from factors such as incomplete planning, limited financial resources, or uncertainty about how to respond during the later stages of a disaster. These households may still face challenges in responding to prolonged or severe climate-related disasters, such as floods or droughts.

The 21.8% of respondents who feel not prepared highlight a significant vulnerability. This group may not have engaged in any formal disaster preparedness activities or may lack the resources to do so. For them, the risk of being severely affected by a climate-related disaster is much higher, as they may not have the necessary supplies, information, or coping strategies in place. This lack of preparedness can leave these households particularly exposed, especially in high-risk areas where climate impacts are more frequent and severe.

Finally, the 3.8% of respondents who are unsure about their preparedness indicates a degree of uncertainty, possibly due to a lack of information or awareness of what constitutes adequate disaster preparedness. These households may not be fully aware of the steps they need to take or the risks they face, and as a result, they are in a more precarious position.

In summary, while a majority of households feel somewhat ready to handle climate-related disasters, the relatively low percentage of those feeling very prepared, combined with the significant proportion of unprepared households, suggests a need for more comprehensive disaster preparedness initiatives. Increasing access to information, resources, and support, particularly for those who feel less prepared or are unsure, will be crucial in ensuring that households are better equipped to face the growing threat of climate-related disasters.

**Establishment of Early Warning Systems:** The establishment of early warning systems, supported by ACF, played a crucial role in reducing the impact of the floods. These systems included both technological solutions and traditional communication methods, allowing for the timely dissemination of flood alerts. The early warning systems were particularly effective in giving communities the time needed to secure food stocks, protect water sources, and prepare for potential health emergencies. A government official in Balochistan noted, "The early warnings saved lives and protected livelihoods. People were able to move their families to safer areas, secure their food, and protect their health." This comprehensive preparedness reduced the overall vulnerability of the communities.

**Table 20 Access to Early Warning Systems For Disasters**

Serial No.	Responses	Percentage %
1.	Yes	59.0
2.	No	41.0
3.	Total	100.0

The table 20 above shows that 59.0% of respondents had access to early warning systems for disasters, while 41.0% did not. This reflects a moderate level of access to early warning systems in the community. From the perspective of project objectives, which likely aim to enhance community preparedness and reduce disaster-

related risks, the goal should be to increase this coverage to ensure that all individuals and households are equipped with timely information to act before a disaster strikes. The effectiveness of early warning systems in mitigating the impact of climate-related disasters depends on how widely they are accessible and how effectively the information is communicated to vulnerable populations. The fact that 41.0% of respondents did not have access to these systems suggests that a large portion of the population is missing out on a critical tool for disaster risk reduction.

To align with the project's objectives, especially in improving disaster preparedness, there needs to be a focus on expanding the reach of EWS to underserved or marginalized communities. This could involve investing in infrastructure, such as mobile-based alerts or community-level broadcasting systems, and ensuring that warning messages are clear, understandable, and actionable for all populations, including those in remote or high-risk areas.

Furthermore, the varying levels of household preparedness, as seen in the earlier data where only 16.7% of households felt very prepared, can be linked to access to EWS. Those without access to early warnings are likely to feel less prepared because they lack timely information about incoming disasters. Increasing EWS coverage would directly contribute to boosting households' preparedness levels and could help shift more respondents from feeling only "somewhat prepared" or "not prepared" to feeling "very prepared."

In summary, improving EWS coverage is key to achieving the project's disaster preparedness and risk mitigation objectives. By ensuring that all community members have access to these systems, the project can contribute to reducing vulnerabilities and improving the overall resilience of households in the face of climate-related disasters.

**Table 21 Household Practices for Environmental Sustainability**

Serial No.	Responses	Percentage %
1.	Yes	62.1
2.	No	37.9
3.	Total	100.0

This table 21 observes whether households engage in practices that promote environmental sustainability, such as recycling and water conservation. 62.1% of respondents report practicing these measures, while 37.9% do not. This shows that most households are involved in sustainability efforts, though a substantial minority is not. The data showing that 62.1% of respondents engage in practices that promote environmental sustainability, such as recycling and water conservation, while 37.9% do not, indicates that a majority of households are making efforts to adopt eco-friendly behaviors. This is a positive sign that awareness of the importance of environmental sustainability is growing, with many households recognizing the value of practices like reducing water consumption, managing waste responsibly, and conserving natural resources.

The 62.1% who report practicing sustainability measures may be responding to increased awareness campaigns, education programs, or local initiatives promoting green practices. These households are likely contributing to long-term resilience by reducing their environmental footprint and helping mitigate factors that exacerbate climate-related risks, such as deforestation, water scarcity, and pollution. Sustainability measures like water conservation are particularly relevant in flood-prone or drought-affected areas, where managing water resources wisely can reduce vulnerability to climate extremes.

However, the 37.9% who do not engage in these sustainability practices represent a substantial minority that may be missing out on contributing to both environmental protection and disaster risk reduction. The

reasons for this lack of engagement could be varied, including limited access to resources for recycling or water conservation, lack of awareness about the importance of sustainability, or competing priorities in daily survival. For instance, in areas severely affected by the 2022 floods, some households may be focused on immediate recovery and basic needs rather than on long-term environmental practices.

The gap in participation also suggests that additional efforts are needed to encourage broader adoption of sustainability measures. This could involve expanding access to resources such as recycling programs, promoting the benefits of water conservation, and integrating sustainability into disaster preparedness and recovery efforts. Ensuring that all households, especially those in vulnerable areas, are informed and equipped to engage in environmental sustainability practices can contribute to both community resilience and the protection of natural ecosystems.

In the context of the project's objectives, which likely focus on both disaster preparedness and long-term resilience, increasing household participation in sustainability efforts could be a key strategy. By promoting wider adoption of practices like recycling and water conservation, the project can help reduce the environmental factors that contribute to disaster risk while building more sustainable, resilient communities.

**Table 22 Community-Led Environmental Sustainability Initiatives**

Serial No.	Responses	Percentage %
1.	Yes	64.4
2.	No	35.6
3.	Total	100.0

The data in table 22 indicates that 64.4% of respondents are aware of community-led initiatives promoting environmental sustainability, while 35.6% are not, reflects a strong level of awareness about local efforts aimed at fostering sustainability. This majority awareness suggests that many communities are actively engaged in initiatives such as recycling programs, water conservation efforts, tree planting, or the promotion of renewable energy use. These initiatives likely play a critical role in not only protecting the environment but also enhancing community resilience to climate-related disasters by addressing key sustainability challenges. The high level of awareness (64.4%) indicates that communication and outreach efforts by community organizations, local governments, or NGOs have been effective in informing people about sustainability initiatives. This awareness can lead to greater participation and support from the community, further strengthening these initiatives. In turn, this can contribute to the long-term goal of creating more environmentally sustainable and disaster-resilient communities, as practices like waste management, water conservation, and reforestation help mitigate risks associated with floods, droughts, and environmental degradation.

However, the 35.6% of respondents who are unaware of such initiatives highlights a gap in outreach or engagement that needs to be addressed. This group may include individuals living in more isolated or marginalized areas, where community-led sustainability efforts have not yet reached or where communication channels are less effective. Increasing awareness among these populations is crucial for achieving wider community involvement in sustainability practices, which can have a direct impact on local environmental protection and disaster risk reduction.

To further the project's objectives, it is important to close this gap in awareness by expanding community outreach and making sustainability initiatives more inclusive. This could involve targeted campaigns to reach those who are unaware of existing programs, involving local leaders to spread awareness, and ensuring that initiatives are accessible and understandable to all members of the community. By doing so, the project can

encourage greater participation in environmental sustainability efforts, thereby promoting both ecological health and community resilience to climate-related risks.

**Table 23 Contribution of Sustainability Practices to Community Resilience**

Serial No.	Responses	Percentage %
1.	Yes	72.1
2.	No	27.9
3.	Total	100.0

The table 23 shows whether respondents believe that environmental sustainability practices contribute to their community's long-term resilience. 72.1% think these practices are beneficial, while 27.9% do not. This indicates strong support for the role of sustainability in enhancing community resilience while 27.9% do not, highlights a need to understand why nearly a third of the population holds this view. Several potential factors could explain this skepticism. For some, the immediate benefits of sustainability may not be apparent, particularly for those dealing with pressing concerns like poverty or post-disaster recovery, where the long-term gains of such practices can seem disconnected from their daily challenges. Resource constraints also play a role, as households with limited access to recycling infrastructure or clean water may find sustainability efforts difficult or unachievable. Additionally, low levels of education or awareness about the connection between sustainability and disaster resilience could contribute to this viewpoint, as some may not fully understand how practices like water conservation or waste management reduce risks during disasters. Others may perceive that their individual actions will not make a significant impact, especially if community-wide participation in sustainability initiatives is low. Cultural or social norms might also influence attitudes, with traditional practices sometimes conflicting with modern sustainability efforts. Finally, the lack of visible success from sustainability initiatives in certain areas may lead to doubts about their effectiveness in building resilience. Addressing these barriers through targeted education, accessible sustainability programs, and showcasing successful initiatives could help shift perceptions and improve support for the role of sustainability in enhancing community resilience.

**Community and Government Stakeholder Feedback:** The effectiveness of these interventions was widely acknowledged by both community members and government stakeholders. ACF's approach to resilience-building was seen as holistic, addressing the multifaceted nature of vulnerability in flood-prone areas. A government official remarked, "The partnership with ACF has significantly bolstered our disaster response capabilities. The communities are more prepared now than they were before, with better health, food security, and access to clean water." This endorsement underscores the alignment between ACF's interventions and the broader goals of enhancing community resilience.

**Table 24 Knowledge of Nearest Emergency Shelter**

Serial No.	Responses	Percentage %
1.	Yes	64.1
2.	No	35.9
3.	Total	100.0

The table 24 shows respondents' awareness of the location of the nearest emergency shelter. 64.1% of respondents know where the nearest shelter is located, while 35.9% do not. This indicates a majority awareness of emergency shelter locations, though a significant number remain unaware.

Table 25 Receipt of Disaster Preparedness Information		
Serial No.	Responses	Percentage %
1.	Yes	60.0
2.	No	40.0
3.	Total	100.0

The table 25 shows whether respondents have received information from local authorities about disaster preparedness in the past year. 60.0% have received such information, while 40.0% have not. This suggests a good level of communication from local authorities, though a sizable number, i.e., 40% has not been reached.

Table 26 Adequacy of Local Authorities' Support for Disaster Preparedness		
Serial No.	Responses	Percentage %
1.	Yes	60.0
2.	No	40.0
3.	Total	100.0

The table 26 shows how respondents feel about the adequacy of support provided by local authorities for disaster preparedness and response. 60.0% believe that support is adequate, while 40.0% do not. This indicates a generally positive perception of local authorities' support, though there are concerns among a significant portion of respondents. The fact that 40.0% of respondents feel the support provided by local authorities for disaster preparedness and response is not adequate raises important questions about the reasons behind this perception. There are several potential factors that could contribute to this dissatisfaction.

First, insufficient resources may play a key role. Some communities, particularly in rural or marginalized areas, may feel that they are not receiving enough financial, technical, or logistical support to effectively prepare for or respond to disasters. This could include inadequate provision of early warning systems, emergency shelters, or basic necessities like food, water, and healthcare during emergencies.

Second, limited outreach or communication from local authorities might contribute to the feeling that support is inadequate. As seen in previous data, 40% of respondents have not received disaster preparedness information, which could lead to the perception that authorities are not providing enough guidance or assistance.

Third, slow or inefficient response times during past disasters could influence perceptions of inadequacy. If communities have experienced delayed or poorly coordinated responses to previous disasters, they may lack confidence in local authorities' ability to respond effectively in future emergencies.

Fourth, lack of community engagement in disaster preparedness planning could also be a factor. If local authorities are not involving communities in the decision-making process or addressing local concerns, respondents may feel that the support is not tailored to their specific needs or realities.

Lastly, geographic or logistical challenges might create inequities in the distribution of support. Communities in remote or hard-to-reach areas might perceive that they are receiving less attention or fewer resources compared to more accessible areas.

Addressing these concerns would require local authorities to enhance resource allocation, improve communication and outreach, ensure faster and more effective disaster response, and involve communities in preparedness efforts. By tackling these issues, local authorities can work towards providing more equitable and adequate support to all community members.

**Challenges in Remote Areas:** Despite the overall success, some challenges hindered the full realization of these interventions' potential, particularly in remote and hard-to-reach areas. The geographic isolation of certain communities in Balochistan made it difficult to implement health, nutrition, food security, and WASH programs effectively. A community member from a remote village in Pishin expressed, "We are still waiting for some of the promised health services and clean water. The floods reached us before the help could." This highlights the ongoing need to address accessibility issues in future interventions to ensure that all communities benefit equally.

Table 27 Functionality of Public Infrastructure During Disasters		
Serial No.	Responses	Percentage %
1.	Yes	24.6
2.	Partially Yes	49.5
3.	No	24.4
4.	Not Applicable	1.5
5.	Total	100.0

The table 27 above shows 24.6% of respondents believed public infrastructure would continue to function during natural disasters, 49.5% said it would function partially, 24.4% said it would not, and 1.5% said it was not applicable. This suggests varying confidence in the functionality of public infrastructure during disasters.

Table 28 Functionality of Public Infrastructure After Disasters		
Serial No.	Responses	Percentage %
1.	Yes	27.7
2.	Partially Yes	39.7
3.	No	30.8
4.	Not Applicable	1.8
5.	Total	100.0

The table 28 shows how respondents perceive the functionality of public infrastructure such as schools, health facilities, and water facilities after a natural disaster. 27.7% believe that most public infrastructure will be fully functional within a week, while 39.7% think it will be partially functional. 30.8% of respondents doubt that the infrastructure will be functional at all, and 1.8% find this question not applicable.



## What specific outcomes were achieved through these interventions in terms of reducing vulnerability and improving adaptive capacity?

The interventions implemented by ACF in Sindh and Balochistan provinces led to several specific outcomes that significantly reduced community vulnerability and improved adaptive capacity in the face of the 2022 floods. These outcomes were evident across multiple sectors, including health, nutrition, food security, Water, Sanitation, and Hygiene (WASH), and overall disaster preparedness.

**Health and Nutrition Outcomes:** One of the most significant outcomes was the reduction in health-related vulnerabilities. Through the deployment of mobile health clinics and the provision of essential medical supplies, ACF helped prevent disease outbreaks, which are common in post-flood situations. The targeted nutrition programs for children and pregnant women also helped to mitigate the risk of malnutrition, which could have been exacerbated by the floods. A community health worker in Sindh noted, "The timely intervention by ACF in providing medical care and nutritional support saved many lives, particularly among the most vulnerable groups." This proactive approach to health and nutrition not only reduced immediate vulnerabilities but also strengthened the community's capacity to maintain good health in the aftermath of the disaster.

**Food Security Outcomes:** ACF's interventions in food security were crucial in preventing food shortages and ensuring that families had access to adequate nutrition during and after the floods. The distribution of food rations, along with the provision of seeds and agricultural tools, enabled communities to quickly recover their agricultural activities once the floodwaters receded. In addition, the establishment of community food banks provided a buffer against potential future food crises. A farmer from Balochistan shared, "With the seeds and tools provided by ACF, we were able to replant our crops quickly, and the food bank helped us during the toughest times." These measures not only addressed immediate food needs but also improved the community's adaptive capacity by ensuring food security in the long term.

**WASH Outcomes:** The WASH interventions implemented by ACF led to significant improvements in access to clean water and sanitation facilities, which are critical for reducing vulnerability to waterborne diseases. The construction of elevated latrines and the distribution of water purification tablets ensured that communities could maintain hygiene standards even in the midst of the floods. A resident from Sindh mentioned, "Thanks to the water purification tablets and new latrines, we were able to avoid the diseases that usually spread after floods." The success of these WASH interventions was reflected in the lower incidence of diarrheal diseases reported by local health centers, demonstrating a clear reduction in vulnerability.

**Community-Based Disaster Risk Reduction (DRR) Outcomes:** The DRR training provided by ACF had a profound impact on improving the community's adaptive capacity. By equipping local residents with the knowledge and skills to respond effectively to disasters, the training programs fostered a culture of preparedness and resilience. Communities became more organized, with the establishment of disaster management committees that played a critical role during the floods. A community leader in Balochistan stated, "The DRR training taught us how to work together and take quick action. When the floods came, we were ready and knew what to do." This enhanced organizational capacity not only reduced immediate vulnerabilities but also strengthened the community's ability to adapt to future disasters.

**Early Warning Systems Outcomes:** The implementation of early warning systems was another key outcome

that contributed to reducing vulnerability and improving adaptive capacity. These systems, which included both high-tech solutions and traditional communication networks, provided timely alerts that allowed communities to take protective measures before the floods struck. A local government official in Sindh highlighted, "The early warning systems were crucial in giving us the time to evacuate and protect our livestock and assets. It made a big difference in how we coped with the floods." The success of these systems demonstrated a significant improvement in the community's ability to anticipate and respond to natural disasters, thereby enhancing overall resilience.

**Reduced Vulnerability and Enhanced Adaptive Capacity:** Collectively, these interventions led to a reduction in the vulnerability of the communities in Sindh and Balochistan to the impacts of the 2022 floods. By addressing critical needs in health, nutrition, food security, and WASH, and by improving disaster preparedness and response through DRR training and early warning systems, ACF helped build a more resilient community infrastructure. This was reflected in the communities' ability to withstand the floods with fewer casualties, less disease, and greater overall stability. A local NGO in Sindh noted, "The combination of ACF's interventions has not only protected lives and livelihoods but has also empowered these communities to be better prepared for future challenges."

**Table 29: Continuation of Cropping Cycle without External Assistance**

Serial No.	Responses	Percentage %
1.	Yes, without any assistance	7.8
2.	Yes, but with minimal assistance	39.3
3.	No, I still require significant assistance	53.0
4.	Total	100.0

As can be seen in table 29, more than half of the respondents (53%) still need outside help to keep their farming going, which suggests that they haven't yet fully recovered from the floods. While 39.3% can get by with just a little help, only a small portion (7.8%) can continue farming on their own, showing that recovery has been uneven across different households. The type of help that more than half of the respondents (53%) still need to keep their farming going likely includes a range of support to address the lasting impacts of the floods on their agricultural activities. This help may consist of financial assistance, such as grants or loans to buy seeds, fertilizers, and other inputs that were lost or damaged during the floods. Farmers may also require technical support to repair or replace damaged infrastructure, such as irrigation systems, farm equipment, and tools, which are critical for resuming normal operations. In addition, livestock support could be necessary for those who lost animals during the floods, as livestock often play an essential role in rural livelihoods. Farmers may also need training on climate-smart or flood-resilient farming practices to adapt to changing environmental conditions and reduce the risk of future losses. Moreover, access to markets and rebuilding of local supply chains may be critical, as floods can disrupt transportation and market access, affecting farmers' ability to sell their products and sustain their livelihoods.

The fact that 39.3% of respondents can get by with just a little help suggests that while these households have made progress in their recovery, they still require some external assistance, possibly in the form of short-term financial aid or technical advice on crop management and soil restoration. The small portion of respondents (7.8%) who can continue farming on their own likely have more resilient resources or support networks, enabling them to recover more quickly.

This uneven recovery underscores the need for targeted assistance that addresses the specific challenges faced by farmers in different stages of recovery. Comprehensive support, ranging from financial aid to

infrastructure repair and knowledge-sharing on sustainable practices, is crucial for ensuring that all households can fully recover and resume farming activities.

**Table 30 Preparedness for Future Disasters  
(household is capable of protecting and preserving your livelihoods)**

Serial No.	Responses	Percentage %
1.	Yes, we are well-prepared	25.3
2.	Somewhat, but we may need some support	36.9
3.	No, we are not prepared	37.8
4.	Total	100.0

As highlighted in table 30, the responses reveal a mixed level of confidence in disaster preparedness, with 37.8% of households feeling unprepared and 36.9% only somewhat prepared. This suggests that many families remain vulnerable to future disasters and may require additional support to build resilience. Conversely, 25.3% feel well-prepared, indicating that some progress has been made in disaster readiness within the community. The mixed level of confidence in disaster preparedness, with 37.8% of households feeling unprepared and 36.9% only somewhat prepared, points to several factors that contribute to this vulnerability. One key factor could be limited access to resources. Households with fewer financial means may struggle to invest in disaster preparedness measures, such as stockpiling emergency supplies, reinforcing homes, or accessing early warning systems. In rural or marginalized communities, this lack of resources can leave families more exposed to the risks posed by natural disasters. Another significant factor is insufficient outreach and education. Many families may not have received adequate information on how to prepare for disasters or what steps to take during emergencies, contributing to a lack of preparedness. As seen in previous data, 40% of households have not received disaster preparedness information from local authorities, which likely fuels feelings of vulnerability and uncertainty.

Geographic location also plays a role. Families living in high-risk areas, such as flood-prone regions or remote areas with limited access to infrastructure, may feel more unprepared because they face greater challenges in protecting their homes and livelihoods from disasters. The lack of proper infrastructure, such as flood barriers or drainage systems, can exacerbate these feelings of unpreparedness. The varying levels of community engagement in disaster preparedness activities, such as drills or training programs, may also influence confidence. Households that have participated in such activities are likely to feel more prepared, while those who have not may feel less equipped to handle emergencies. Similarly, previous experience with disasters can shape preparedness levels. Families that have previously experienced poor disaster response or prolonged recovery periods may have lower confidence in their ability to withstand future disasters.

Conversely, the 25.3% of households that feel well-prepared likely have better access to resources, more exposure to preparedness training, or live in areas with stronger disaster mitigation infrastructure. This suggests that progress has been made in certain segments of the community, possibly through targeted interventions, but the overall mixed confidence levels highlight the need for more comprehensive support to help all families build resilience against future disasters.



**Table 31 Livelihood Diversification Post Flood  
(e.g., engaging in new types of work or income-generating activities)**

Serial No.	Responses	Percentage %
1.	Yes, we have diversified significantly	30.0
2.	Yes, we have made some diversification	53.1
3.	No, we have not diversified	16.9
4.	Total	100.0

The table 31 above shows (53.1%) have started diversifying their income sources since the floods, with 30% making significant changes. This shows that people are trying to adapt and reduce their risks by not depending on just one source of income. However, the need for ongoing support remains important as households continue to find their way in a post-flood environment.

**Table 32 Adoption of Climate-Smart Agricultural Practices  
(e.g., drought-resistant crops, water conservation techniques)**

Serial No.	Responses	Percentage %
1.	Yes, we have adopted several practices	34.3
2.	Yes, we have adopted a few practices	26.6
3.	No, we have not adopted any such practices	39.1
4.	Total	100.0

The table 32 presents that the adoption of climate-smart agricultural practices varies, with 34.3% of respondents adopting multiple practices such as drought-resistant crop varieties, water-efficient irrigation techniques (like drip irrigation), crop rotation, agroforestry, organic farming, conservation tillage, and integrated pest management. These practices help farmers adapt to changing climatic conditions, improve soil health, and ensure more sustainable and resilient agricultural systems, while 26.6% adopting a few of these practices. This indicates a growing awareness and implementation of sustainable farming methods, although the fact that 39.1% have not adopted any such practices due to several barriers. Key reasons including limited access to resources such as financial support, seeds, tools, or technology needed to implement climate-smart practices. Additionally, lack of awareness or knowledge about these practices and their benefits also prevented farmers from adopting them. In some cases, cultural resistance or reliance on traditional farming methods made farmers hesitant to try new approaches. Furthermore, uncertainty about climate risks or market stability also event farmers to avoid changes that they perceive as risky, especially if they have not seen clear, immediate benefits from adopting such practices in their local context. Lastly, poor access to extension services or technical support can also hinder farmers from receiving the guidance they need to transition to more sustainable methods."

**Table 33 Access to Social Protection Programs (e.g., cash transfers, food assistance)**

Serial No.	Responses	Percentage %
1.	Yes, I am enrolled and can access these programs when needed	50.3
2.	Yes, but I am unsure if I can access them when needed	19.5
3.	No, I do not have access to any social protection programs	30.3
4.	Total	100.0

The table 33 shows whether respondents have access to social protection programs like cash transfers or food assistance that they can rely on in anticipation of a disaster. 50.3% are enrolled and can access these programs when needed, 19.5% are unsure of their access, and 30.3% do not have access to any social protection programs. This indicates that while a significant portion of respondents have access, there is uncertainty and lack of access among others.

**Table 34 Household or Community Savings Strategy**

Serial No.	Responses	Percentage %
1.	Yes, we have a well-established savings strategy	47.2
2.	Yes, but the strategy is not fully developed or reliable	17.7
3.	No, we do not have any savings strategy in place	35.1
4.	Total	100.0

The table 34 provides details whether households or communities have a savings strategy, such as a communal savings group or personal savings, to mitigate disaster impacts. 47.2% have a well-established strategy, 17.7% have a strategy but it is not fully developed, and 35.1% do not have a savings strategy. This shows that while many have a savings strategy, a significant number either lack one or have an unreliable strategy.

- What are the key factors that contributed to or hindered the success of these interventions?

The success of ACF's interventions in Sindh and Balochistan was influenced by several key factors, both positive and negative. These factors shaped the effectiveness of the interventions in building community resilience against the 2022 floods.

### Key Factors Contributing to Success:

**Community Engagement and Ownership:** One of the most significant factors contributing to the success of ACF's interventions was the high level of community engagement and ownership. ACF actively involved community members in the planning and implementation of interventions, ensuring that the initiatives were tailored to local needs and contexts. The formation of Community-Based Disaster Management Committees (CBDMCs) empowered local leaders and residents to take charge of disaster preparedness and response

efforts. A community leader in Sindh commented, "By involving us from the beginning, ACF made sure that the solutions were what we needed and could manage ourselves." This sense of ownership was critical in ensuring the sustainability and effectiveness of the interventions.

**Integration of Traditional Knowledge with Modern Practices:** The integration of traditional knowledge with modern disaster risk reduction (DRR) practices was another key factor in the success of the interventions. ACF respected and incorporated local knowledge and practices, which enhanced the community's acceptance and trust in the interventions. For example, traditional flood forecasting methods were combined with modern early warning systems, providing a more robust approach to disaster preparedness. A resident from Balochistan remarked, "We combined what we already knew with new ideas from ACF, and that made us stronger." This synergy between traditional and modern practices improved the overall resilience of the communities.

**Multisectoral Approach:** The comprehensive, multisectoral approach adopted by ACF-encompassing health, nutrition, food security, WASH, infrastructure, and DRR-was crucial in addressing the diverse needs of the communities. By tackling multiple vulnerabilities simultaneously, ACF was able to create a more holistic and resilient community structure. A partner organization highlighted, "ACF's approach was not just about one area; they looked at the whole picture, which made a real difference." This integrated approach ensured that the interventions had a broader impact on reducing vulnerability and enhancing adaptive capacity.

**Strong Partnerships with Local Stakeholders:** The success of the interventions was also supported by strong partnerships with local governments, NGOs, and other stakeholders. These partnerships facilitated the coordination and implementation of interventions, leveraging local resources and expertise. A government official in Sindh noted, "Our collaboration with ACF was instrumental in reaching the most vulnerable communities and delivering the necessary support quickly." These partnerships enhanced the effectiveness of the interventions by ensuring that they were aligned with local disaster management strategies and priorities.

### Key Factors Hindering Success:

**Geographic and Accessibility Challenges:** One of the primary challenges that hindered the success of the interventions was the geographic and accessibility barriers in remote areas of Sindh and Balochistan. The difficult poor infrastructure in these regions made it challenging to deliver aid, implement programs. A community member from a remote village in Balochistan expressed frustration, saying, "We are so far away that help takes too long to reach us. By the time it arrives, the damage is already done." These accessibility issues limited the reach and impact of some interventions, particularly in the most isolated communities.

**Limited Resources and Funding Constraints:** While ACF's interventions were comprehensive, limited resources and funding constraints posed challenges to the full implementation and sustainability of some programs. For instance, the continuous operation and maintenance of early warning systems and the expansion of health services in remote areas were hampered by insufficient funding. A representative from a partner NGO mentioned, "There's only so much that can be done with the available resources. More funding is needed to maintain and scale these interventions." These constraints sometimes led to gaps in service delivery, particularly in the most resource-intensive areas.

**Cultural and Social Barriers:** In some instances, cultural and social barriers hindered the success of certain interventions, particularly in the areas of health, nutrition, and WASH. Resistance to behavior change, such as adopting new hygiene practices or utilizing health services, was observed in some communities due to deep-rooted cultural norms. A health worker in Sindh noted, "Changing long-held beliefs and practices takes time, and not everyone is willing to adopt new ways, even if they are better for their health." Overcoming these barriers required additional time, effort, and culturally sensitive approaches, which were not always fully available.

**Environmental and Climatic Factors:** The challenging environmental and climatic conditions in the region, including extreme weather patterns and the severity of the floods, sometimes overwhelmed the interventions. The unpredictability and intensity of the floods exceeded the preparedness measures in certain areas, leading to unanticipated challenges. A community member remarked, "No matter how prepared we thought we were, the floods were worse than anything we had seen before." These environmental factors highlighted the limitations of even the best-prepared interventions when faced with extreme natural events.

### 3.3 Identifying Persistent Gaps with Community Capabilities and Government Support Structures

**Objective 2: Identifying persistent gaps within community capabilities and governmental support structures, including addressing critical humanitarian needs during emergencies.**

- What are the critical gaps in community capabilities and governmental support structures that persisted during the 2022 floods?

Despite the progress made through various interventions, significant gaps in both community capabilities and governmental support structures persisted during the 2022 floods. These gaps highlighted vulnerabilities that hindered effective disaster response and recovery efforts, leaving many communities vulnerable and underprepared.

#### **Community Capabilities Gaps:**

**Limited Access to Resources:** One of the most persistent and challenging gaps in community capabilities was the limited access to essential resources, such as emergency supplies, safe shelter, and healthcare. In many remote and underserved areas, the infrastructure and resource base were inadequate to meet the needs of the population during a disaster of this magnitude. For instance, communities in Balochistan and Sindh lacked access to emergency kits, clean water, food supplies, and basic medical care. This deficiency was exacerbated by the geographical isolation of these areas, which made it difficult for aid and supplies to reach them in a timely manner. A resident from a village in Balochistan remarked, "We had no access to emergency kits or even basic first aid. When the floods came, we were left to fend for ourselves with very little." This lack of resources significantly exacerbated the impact of the floods, leaving many vulnerable populations without the necessary tools to protect themselves and recover from the disaster.

Furthermore, the absence of resilient infrastructure, such as flood-resistant shelters and properly maintained evacuation routes, further exposed communities to the dangers of flooding. The inadequacy of safe shelters forced many to take refuge in unsafe or overcrowded conditions, increasing the risk of injury, disease, and further displacement. The limited healthcare facilities in these regions were quickly overwhelmed, leading to delays in treatment and a lack of access to critical medical services during the height of the emergency.

**Insufficient Knowledge and Skills:** While Disaster Risk Reduction (DRR) training programs had been implemented in various communities, gaps in knowledge and skills persisted, particularly among the most isolated and marginalized groups. These gaps were evident in the inadequate response to the floods in several areas, where residents were unsure of the appropriate actions to take in the face of such an

overwhelming disaster. The training that had been provided was not always comprehensive or widely disseminated, leaving many community members unprepared to handle the crisis.

A local NGO worker observed, "Not everyone was trained, and some communities still didn't know how to respond effectively when the floods hit." This lack of preparedness was particularly acute in areas where DRR initiatives had not been sufficiently integrated into the community's daily life. The gaps in knowledge and skills also extended to specific areas such as first aid, emergency evacuation procedures, and the proper use of early warning systems. Without adequate training, many communities could not fully utilize the resources and systems available to them, resulting in a less effective response and higher levels of vulnerability.

**Inadequate Social Cohesion:** In some communities, the lack of strong social cohesion further weakened the collective response to the disaster. Social cohesion, which involves the strength of relationships and the sense of solidarity among community members, is crucial for effective disaster response. In areas where social ties were weak, residents were less likely to collaborate and support each other during the emergency, leading to disorganized and ineffective responses.

A community leader in Sindh noted, "In our village, people didn't come together as they should have. Without unity, it's hard to face a disaster like this." This gap in social cohesion was particularly evident in larger, more diverse communities where pre-existing social divisions or a lack of trust between different groups impeded cooperative efforts. The absence of strong community networks made it difficult for residents to organize themselves, share resources, and provide mutual aid during the floods. This fragmentation not only reduced the overall effectiveness of the community's response but also left the most vulnerable individuals, such as the elderly, disabled, and those living alone, without the support they needed.

### **Governmental Support Structures Gaps:**

**Delayed and Inadequate Response:** The governmental response to the floods was often marked by delays and inadequacies, particularly in remote and hard-to-reach areas. Bureaucratic inefficiencies, resource limitations, and logistical challenges were significant barriers to the timely delivery of aid and services. These issues were compounded by the scale of the disaster, which overwhelmed the existing governmental capacities. As a result, many communities were left without the necessary assistance during critical moments of the emergency.

A government official admitted, "We struggled to get resources to the areas that needed them the most. The system is not as responsive as it should be." This delayed response was particularly detrimental in the initial stages of the disaster, when timely intervention could have mitigated the worst impacts of the floods. The inadequate governmental response also reflected broader systemic issues, such as insufficient investment in disaster preparedness and response infrastructure, as well as a lack of coordination between different levels of government.

**Lack of Coordination Among Agencies:** Another significant gap was the lack of coordination among various government agencies and between the government and humanitarian organizations. This lack of coordination led to overlaps in some areas and gaps in others, resulting in inefficient use of resources and inconsistent service delivery. The absence of a well-coordinated response plan meant that some communities received duplicated aid while others received none, and critical needs were either over- or under-addressed.

A partner organization pointed out, "There was a lot of confusion about who was responsible for what, which slowed down the response and left some communities without help." This disorganization not only reduced the overall effectiveness of the response but also created frustrations and mistrust among affected communities. The lack of clear communication channels and established protocols for inter-agency



cooperation further exacerbated these challenges, leading to a disjointed and sometimes chaotic response effort.

**Inadequate Social Protection Systems:** The existing social protection systems were insufficient to provide the necessary safety nets during the floods. Social protection mechanisms, such as financial assistance, unemployment benefits, and other forms of social support, were either not accessible or inadequate to meet the needs of vulnerable populations. Many of those living in poverty, who were already at risk, did not receive timely or sufficient support to help them cope with the loss of livelihoods, homes, and assets.

A community member from Sindh shared, "We didn't receive any help from the government, even though we lost everything in the floods. There was no safety net for people like us." This gap in social protection left many households struggling to recover from the disaster, pushing them further into poverty and vulnerability. The lack of a robust social safety net meant that affected populations had to rely on inadequate informal support systems, which were often overwhelmed and unable to meet the increased demands brought on by the disaster. The absence of effective social protection not only hindered immediate relief efforts but also prolonged the recovery process, leaving many communities in a state of ongoing crisis.

- How effectively were the critical humanitarian needs (health, nutrition, food security, social protection, WASH, and protection) addressed during the 2022 floods?

The response to the critical humanitarian needs during the 2022 floods in Sindh and Balochistan varied significantly across different sectors. While some needs were addressed more effectively than others, the overall response highlighted both strengths and areas where improvements are necessary.

**Health:** The health sector response during the 2022 floods was partially effective, with significant efforts made by both governmental and non-governmental organizations to provide emergency medical care. Mobile health clinics, established by organizations such as ACF, played a crucial role in reaching flood-affected populations, particularly in remote areas. These clinics provided essential medical services, including treatment for injuries, disease prevention, and maternal health care.

However, the effectiveness of the health response was limited by several factors. The scale of the disaster overwhelmed existing healthcare facilities, leading to shortages of medical supplies, personnel, and medications. Many remote communities reported delays in receiving medical assistance, which exacerbated health issues such as waterborne diseases and malnutrition. A health worker in Balochistan noted, "While we did our best to reach everyone, the sheer scale of the disaster meant that many people did not get the care they needed in time." This indicates that while the efforts made were significant, the overall health response was constrained by logistical challenges and insufficient resources.

**Nutrition:** The response to nutritional needs during the floods was relatively effective, particularly in preventing widespread malnutrition among vulnerable groups such as children and pregnant women. ACF and other organizations implemented targeted nutrition programs, including the distribution of ready-to-use therapeutic foods (RUTF), vitamin supplements, and fortified foods. These efforts helped to stabilize the nutritional status of affected populations, particularly in areas where food security was severely compromised.

However, challenges persisted in ensuring consistent access to these nutritional interventions, particularly in remote and hard-to-reach areas. Distribution networks were disrupted by the floods, and there were reports of delays in the delivery of nutritional supplements. A mother from a flood-affected village in Sindh commented, "The food for our children was a lifeline, but it came late, and not everyone got what they needed." Despite these challenges, the nutrition response was largely successful in preventing a large-scale nutritional crisis, though improvements in distribution logistics are needed for future emergencies.

**Food Security:** The food security response during the 2022 floods was mixed in its effectiveness. Immediate food needs were addressed through the distribution of food rations, which helped prevent acute hunger in many flood-affected communities. Additionally, efforts were made to support agricultural recovery by providing seeds, tools, and other inputs to farmers whose crops had been destroyed by the floods.

However, these efforts were not sufficient to fully address the long-term food security challenges faced by affected communities. These efforts were not sufficient due to several key challenges. One significant issue was the inability to reach everyone in need of assistance due to resource constraints, with some remote or hard-to-reach areas receiving delayed or insufficient support. This left certain vulnerable communities still facing food insecurity despite the broader aid efforts. Additionally, the scale of the disaster overwhelmed local and international response capacities, meaning that food rations and agricultural inputs were often inadequate to meet the full needs of the affected population. In terms of agricultural recovery, while seeds, tools, and other inputs were provided, logistical challenges such as damaged infrastructure and flooded roads prevented timely distribution to all farmers in need. Moreover, limited follow-up support after the initial distribution of inputs meant that many farmers struggled to fully recover their livelihoods, as ongoing assistance with irrigation, soil recovery, and market access was lacking. Furthermore, resource constraints meant that many farmers did not receive sufficient quantities of seeds and tools to restart farming at the scale necessary to sustain their food security in the long term. Lastly, lack of coordination between aid agencies and local governments contributed to gaps in support, leading to duplication in some areas and insufficient coverage in others."

The floods severely damaged agricultural lands and infrastructure, leading to a significant reduction in food production and availability. A farmer in Balochistan shared, "The food rations helped us survive, but we lost our crops, and it will take a long time to recover." The reliance on food aid underscored the vulnerability of these communities to future food insecurity, and the need for more comprehensive support to restore and sustain agricultural livelihoods.

**Social Protection:** The response in the area of social protection was notably weak during the 2022 floods. Many vulnerable populations, including those living in extreme poverty, the elderly, and disabled individuals, did not receive adequate support to cope with the disaster. Existing social protection mechanisms, such as cash transfers, unemployment benefits, and social safety nets, were either insufficient or inaccessible to many of those in need.

A community member from Sindh expressed frustration, saying, "We lost everything in the floods, and there was no help from the government to support us." This lack of effective social protection left many households without the means to recover from the disaster, forcing them into deeper poverty and prolonged suffering. The inadequacy of social protection measures during the floods highlights a critical gap in the humanitarian response and underscores the need for stronger, more inclusive social protection systems to support vulnerable populations during emergencies.

**Water, Sanitation, and Hygiene (WASH):** The WASH response during the floods was critical in preventing the outbreak of waterborne diseases, but its effectiveness varied across different regions. In areas where ACF and other humanitarian organizations were able to implement WASH interventions, there was a significant reduction in the incidence of diseases such as cholera and diarrhea. These interventions included the

distribution of water purification tablets, the construction of temporary latrines, and hygiene promotion campaigns.

However, in more remote or heavily affected areas, the WASH response faced significant challenges. Floodwaters contaminated drinking water sources, and the destruction of sanitation infrastructure left many communities without access to clean water or safe sanitation facilities. A resident from a flood-affected area in Balochistan noted, "We didn't have clean water for days, and the situation was dire." This highlights the limitations of the WASH response in reaching all affected communities, particularly those in isolated regions. While the interventions were effective where implemented, there is a clear need for improved access and infrastructure to ensure that all communities can maintain safe water and sanitation during emergencies.

**Protection:** The protection of vulnerable groups, including women, children, and the elderly, was a significant concern during the 2022 floods, and the response in this area was insufficient. The disruption of social services and the breakdown of community structures during the floods left many individuals at increased risk of exploitation, abuse, and neglect. Safe spaces and protective services were not adequately provided, leaving many vulnerable individuals without the necessary support.

A local NGO worker in Sindh observed, "The floods left many women and children in vulnerable situations, and there wasn't enough done to protect them." The lack of adequate protection services, particularly in evacuation centers and temporary shelters, exposed significant gaps in the humanitarian response. Addressing these protection needs more effectively requires a stronger focus on safeguarding vulnerable populations and ensuring that protective services are an integral part of emergency response planning.

- Which vulnerable segments of the community faced the most significant challenges during the emergency, and why?

During the 2022 floods in Sindh and Balochistan, several vulnerable segments of the community faced particularly severe challenges. These challenges were largely due to pre-existing vulnerabilities, inadequate support mechanisms, and the scale of the disaster, which exacerbated the difficulties faced by these groups.

### Women and Children:

Women and children were among the most vulnerable segments of the community during the floods, facing significant challenges due to their heightened risk of exploitation, displacement, and health issues. The disruption of social services, such as healthcare, education, and protection services, disproportionately affected women and children, leaving them without essential support during and after the disaster.

- **Health and Safety Risks:** The loss of access to maternal and child healthcare services posed serious risks to pregnant women, new mothers, and young children. The lack of safe spaces in evacuation centers and temporary shelters further exposed women and children to the risk of gender-based violence and exploitation. A woman from Sindh recounted, "We were crowded into shelters with no privacy, and there were no measures to protect us from harm." The absence of targeted protection measures left many women and children vulnerable to abuse and neglect.
- **Disruption of Education:** The floods also severely disrupted the education of children, with many schools being destroyed or repurposed as shelters. This not only interrupted their learning but also

removed a critical source of stability and normalcy during the crisis. A schoolteacher in Balochistan noted, "Our school was flooded, and the children lost months of education. For many, school was their only safe place." The long-term impact of this disruption on children's development and well-being is a significant concern.

### Elderly and Disabled Individuals:

The elderly and disabled individuals faced considerable challenges during the floods due to their limited mobility, dependence on others for care, and the inaccessibility of emergency services. These groups often had difficulty evacuating in time, accessing shelters, and obtaining necessary medical care, which heightened their vulnerability during the disaster.

- **Evacuation and Mobility Issues:** Many elderly and disabled individuals were unable to evacuate quickly or reach safe areas due to their physical limitations and the lack of accessible transportation options. A resident from a village in Balochistan mentioned, "My elderly mother couldn't walk, and we had no way to get her to safety when the floods came." The absence of specialized evacuation plans and resources for these groups left them particularly exposed to the dangers of the floods.
- **Lack of Specialized Care:** The destruction of healthcare facilities and the overwhelming demand for medical services during the floods meant that elderly and disabled individuals often did not receive the specialized care they needed. This included a lack of access to essential medications, mobility aids, and tailored medical attention. The inability to meet these needs exacerbated their suffering and increased the risk of long-term health complications.

### Low-Income Households:

Households living in poverty were disproportionately affected by the floods, facing significant challenges due to their lack of financial resources, precarious living conditions, and limited access to social protection mechanisms. These families were often the first to be affected and the last to receive aid, as they lacked the means to protect their homes, secure emergency supplies, or relocate to safer areas.

- **Loss of Livelihoods and Assets:** The floods devastated the livelihoods of low-income households, particularly those dependent on agriculture, livestock, or informal labor. The destruction of crops, livestock, and small businesses left many families without any source of income, pushing them deeper into poverty. A farmer from Sindh shared, "We lost everything in the floods—our crops, our animals, our income. Now we have nothing to start over with." The lack of financial resilience among these households made recovery extremely difficult and prolonged their dependence on humanitarian aid.
- **Inadequate Social Protection:** The limited reach of social protection systems meant that many low-income households did not receive the financial assistance or support they needed to cope with the disaster. Without savings or insurance, these families were unable to rebuild their homes or replace lost assets, leading to prolonged displacement and hardship. A resident from a low-income household in Balochistan expressed frustration, saying, "We were left to fend for ourselves. There was no help from the government, and we don't know how we will survive." The absence of effective safety nets left these families particularly vulnerable to long-term poverty and food insecurity.

### Remote and Marginalized Communities:

Communities in remote and marginalized areas faced some of the most significant challenges during the floods due to their isolation, lack of infrastructure, and limited access to services. These communities were often overlooked in disaster planning and response efforts, leading to delayed or inadequate assistance.

- **Geographical Isolation:** The geographic isolation of many villages in Balochistan and Sindh made it difficult for aid to reach them in a timely manner. Poor infrastructure, such as unpaved roads and lack of

communication networks, further hindered the delivery of emergency supplies and services. A community leader from a remote village in Balochistan noted, "We were cut off from the rest of the world. No help came for days, and we were left to survive on our own." The delay in receiving aid exacerbated the impact of the floods on these communities, leading to higher levels of suffering and loss.

- **Neglect in Emergency Planning:** Marginalized communities, including those belonging to ethnic or religious minorities, often received less attention in disaster preparedness and response efforts. This neglect was evident in the unequal distribution of aid and resources, which left these communities particularly vulnerable during the floods. A resident from a marginalized community in Sindh shared, "We were forgotten in the response. Other areas got help, but we were left behind." This lack of inclusion in emergency planning and response efforts highlighted deep-seated inequalities that exacerbated the challenges faced by these communities during the disaster.

### 3.4 Analyzing Gaps in Preparedness and Anticipatory Response Framework

**Objective 3: Analyzing gaps in preparedness and the presence and/or implementation of any anticipatory response framework at the government and other stakeholders' level.**

- What were the primary gaps in disaster preparedness observed during the 2022 floods?

The 2022 floods in Sindh and Balochistan revealed several critical gaps in disaster preparedness, which significantly impacted the ability of communities and governments to respond effectively. These gaps contributed to increased vulnerability, higher casualties, and more extensive property damage, underscoring the need for improved disaster preparedness and response mechanisms.

#### **Inadequate Early Warning Systems:**

One of the most glaring gaps in disaster preparedness was the inadequacy of early warning systems. While early warning systems are essential for mitigating the impact of disasters by providing timely alerts to at-risk populations, the systems in place during the 2022 floods were largely ineffective, particularly in remote and rural areas.

- **Limited Reach and Accessibility:** In many regions, particularly in isolated communities, early warning systems either did not exist or were not operational. Where systems were in place, their reach was limited, and they failed to disseminate information effectively to all at-risk populations. The lack of infrastructure, such as communication towers and reliable power sources, further hindered the ability to deliver timely warnings. A resident from a flood-affected area in Sindh noted, "We heard about the floods, but by the time the warnings reached us, it was too late to take meaningful action." This delayed communication meant that many communities were caught unprepared, unable to evacuate or protect their property in time.
- **Insufficiently Specific or Actionable Information:** Even in areas where early warnings were issued, the information provided was often too vague or generic to prompt appropriate action. Communities were informed that flooding was imminent but were not given clear instructions on the severity of the floods, the expected timeline, or specific steps they should take to protect themselves. This lack of actionable

guidance left many unsure of how to respond, leading to a lack of preparedness and increased vulnerability. The failure to tailor warnings to local contexts, such as specifying safe evacuation routes or identifying areas at greatest risk, further diminished the effectiveness of the early warning systems.

### Insufficient Community Preparedness:

The level of disaster preparedness at the community level was also found to be lacking, with many communities unprepared to respond effectively to the floods. This lack of preparedness was due to several factors, including inadequate Disaster Risk Reduction (DRR) training, limited access to emergency supplies, and the absence of localized contingency plans.

- **Inadequate and Uneven DRR Training:** While some communities had received DRR training, these efforts were not widespread or consistent across all regions. Many training programs were limited in scope, reaching only a small fraction of the population and often failing to address the specific needs of the most vulnerable groups. Additionally, the training provided was sometimes too general, lacking practical, hands-on components that could better prepare residents for real-life disaster scenarios. A community leader in Balochistan observed, "We were not prepared. People didn't know where to go or what to do when the floods came." This gap in training left many communities without the necessary knowledge or skills to protect themselves effectively during the floods.
- **Lack of Emergency Supplies and Contingency Plans:** Many communities were also found to be lacking in essential emergency supplies, such as first aid kits, clean water, food rations, and temporary shelters. The absence of these supplies severely limited the ability of residents to respond to the immediate effects of the floods. Moreover, few communities had developed or rehearsed local contingency plans, which are crucial for coordinating evacuation efforts, protecting property, and ensuring the safety of vulnerable individuals such as the elderly, disabled, and children. This lack of preparedness contributed to increased casualties, property loss, and prolonged suffering in the aftermath of the disaster.

### Poorly Maintained Infrastructure:

The floods also revealed significant weaknesses in the existing infrastructure, particularly in terms of flood defenses, drainage systems, and transportation networks. The poor condition of this infrastructure not only exacerbated the impact of the floods but also hindered subsequent relief and recovery efforts.

- **Deterioration of Flood Defenses:** In many areas, flood defenses such as embankments, levees, and dams were poorly maintained, leading to breaches that significantly increased the extent of flooding. These structures, which are meant to provide a first line of defense against rising waters, were often neglected, with little to no maintenance being carried out in the years leading up to the disaster. A government official admitted, "Our infrastructure was not capable of withstanding such severe flooding. The lack of maintenance over the years made the situation worse." The failure of these defenses allowed floodwaters to inundate large areas, causing widespread destruction of homes, crops, and livelihoods.
- **Ineffective Drainage Systems:** Similarly, drainage systems in both urban and rural areas were often clogged or inadequately designed, preventing the efficient removal of floodwater. In many cases, drainage channels were blocked by debris, silt, or informal settlements, leading to severe waterlogging that exacerbated the flooding. The inability to drain floodwater effectively prolonged the duration of the floods, increased the damage to infrastructure, and created ideal conditions for the spread of waterborne diseases.
- **Disrepair of Transportation Networks:** The condition of transportation networks, including roads and bridges, further compounded the challenges of disaster response and recovery. Many roads were either washed away or rendered impassable by the floods, cutting off access to affected communities and delaying the delivery of emergency aid. The disrepair of these networks also hampered evacuation

efforts, leaving many residents stranded in flood-prone areas. This lack of reliable transportation infrastructure severely limited the ability of both government agencies and humanitarian organizations to provide timely assistance to those in need.

### Lack of Coordinated Response Planning:

Another significant gap observed during the 2022 floods was the lack of coordinated disaster response planning between various governmental agencies and stakeholders. The absence of a clear, unified response plan led to disjointed and often duplicative efforts, which reduced the overall effectiveness of the disaster response.

- **Fragmented and Disorganized Response Efforts:** The lack of coordination among different levels of government, as well as between government agencies and non-governmental organizations, resulted in a fragmented response. In many cases, there was confusion over roles and responsibilities, with multiple agencies attempting to address the same needs in some areas, while others were overlooked entirely. A representative from a local NGO highlighted, "There was no clear plan on how to coordinate the response. As a result, many communities were either overlooked or received delayed assistance." This disorganization not only delayed the delivery of critical aid but also led to inefficiencies in resource allocation, with some communities receiving more aid than they could effectively use, while others were left without basic necessities.
- **Inadequate Communication and Information Sharing:** The lack of coordinated planning also extended to communication and information sharing. Many agencies and organizations operated in silos, with little sharing of data, assessments, or response plans. This lack of communication hindered the ability to develop a comprehensive and effective response strategy and often led to misunderstandings or conflicting actions on the ground. The absence of a centralized coordination mechanism meant that valuable time and resources were wasted, further exacerbating the challenges faced by flood-affected communities.

- To what extent were anticipatory response frameworks present and implemented by the government and other stakeholders before and during the 2022 floods?

Anticipatory response frameworks, designed to predict and mitigate the impact of disasters before they occur, play a crucial role in reducing the adverse effects of natural disasters like floods. However, the extent to which these frameworks were present and effectively implemented by the government and other stakeholders before and during the 2022 floods in Sindh and Balochistan varied significantly. The following analysis explores the presence and implementation of these frameworks and identifies the key strengths and weaknesses observed.

### Limited Presence of Anticipatory Response Frameworks:

While anticipatory response frameworks were theoretically present at both the national and regional levels, their actual implementation was inconsistent and often inadequate, particularly at the local level.

- **National and Regional Frameworks:** At the national level, Pakistan has established various disaster management frameworks, such as the National Disaster Management Authority (NDMA) and its

regional counterparts, which are tasked with preparing for and responding to natural disasters. These frameworks include provisions for early warning systems, pre-positioning of emergency supplies, and the development of contingency plans. However, these frameworks were not fully operationalized or integrated into the local disaster management practices in Sindh and Balochistan. A government official noted, "We have plans and systems in place, but they are often not implemented effectively on the ground, especially in remote areas." This gap between policy and practice was a significant weakness in the anticipatory response framework.

- **Local-Level Preparedness:** At the local level, the presence of anticipatory frameworks was even more limited. Many local governments lacked the resources, training, or infrastructure to develop and implement effective disaster preparedness plans. This was particularly evident in rural and marginalized communities, where anticipatory measures such as flood forecasting, evacuation planning, and resource pre-positioning were either absent or poorly executed. A community leader from a flood-affected village in Balochistan commented, "We were not aware of any plans to help us prepare for the floods. It seemed like we were left on our own." The absence of localized anticipatory frameworks left many communities vulnerable to the full impact of the floods.

### Partial Implementation of Anticipatory Response Measures:

Where anticipatory frameworks were present, their implementation was often incomplete, resulting in a patchwork of preparedness levels across different regions.

- **Early Warning Systems:** Early warning systems are a critical component of any anticipatory response framework, allowing communities to take proactive measures to protect themselves. However, as discussed earlier, these systems were not uniformly implemented across Sindh and Balochistan. In some areas, warnings were issued, but they were either too late, too vague, or did not reach the most vulnerable populations. For example, while urban centers may have received timely alerts, many rural communities were left in the dark, with little to no time to evacuate or secure their belongings. A resident from Sindh noted, "We heard the warning, but it came too late for us to do anything." This inconsistent implementation of early warning systems highlighted a significant gap in the anticipatory response framework.
- **Pre-Positioning of Supplies:** Another key element of anticipatory frameworks is the pre-positioning of emergency supplies, such as food, water, medical kits, and temporary shelters. While some efforts were made to stockpile resources in anticipation of the floods, these were often insufficient or not strategically placed to meet the needs of the affected populations. In several cases, supplies were stored in locations that were themselves vulnerable to flooding, leading to the loss or inaccessibility of critical resources when they were most needed. A local NGO worker remarked, "We had supplies ready, but they were either too far away or got damaged in the floods, so they were of little use." This failure to effectively pre-position supplies reduced the overall preparedness and resilience of the communities.
- **Contingency Planning and Drills:** Effective anticipatory response frameworks include regular contingency planning and disaster drills to ensure that communities and responders are prepared for emergencies. However, these activities were not widely implemented before the 2022 floods. In many areas, contingency plans were either outdated, not well communicated, or not rehearsed through drills. As a result, when the floods hit, there was confusion about evacuation routes, safe zones, and the roles of different responders. A community member from Balochistan shared, "There were plans, but no one really knew what to do when the time came. It felt like we were improvising in a crisis." The lack of effective planning and drills further weakened the implementation of anticipatory frameworks.

### Inconsistent Coordination Among Stakeholders:

The effectiveness of anticipatory response frameworks depends heavily on coordination among various stakeholders, including government agencies, NGOs, and community organizations. However, the



coordination observed during the 2022 floods was often inconsistent, leading to gaps in preparedness and response.

- **Government and NGO Collaboration:** In some areas, there was a lack of clear communication and collaboration between government agencies and non-governmental organizations. This resulted in duplicated efforts in some regions and neglected needs in others. For instance, while some NGOs had resources and expertise to contribute to disaster preparedness, their efforts were not always aligned with governmental plans, leading to inefficiencies. A representative from an NGO operating in Sindh commented, "We wanted to help, but it was hard to coordinate with the government, and sometimes we ended up working at cross-purposes." This lack of coordinated effort diminished the potential impact of the anticipatory response frameworks.
- **Community Involvement:** Effective anticipatory frameworks also require active involvement from the communities they are designed to protect. However, in many cases, local communities were not adequately consulted or included in the planning and implementation of disaster preparedness measures. This lack of inclusion led to a disconnect between the needs of the community and the actions taken by the authorities. A community leader in Sindh observed, "The plans were made without our input, so they didn't really address the realities we faced on the ground." This exclusion of community voices weakened the overall effectiveness of the anticipatory response frameworks.

- What are the key weaknesses in the existing anticipatory response frameworks that need to be addressed?

The 2022 floods in Sindh and Balochistan exposed several key weaknesses in the existing anticipatory response frameworks. These weaknesses hindered the effectiveness of disaster preparedness and response efforts, highlighting critical areas that need to be addressed to improve resilience and mitigate the impact of future disasters.

### **Inadequate Coverage and Accessibility:**

One of the most significant weaknesses in the existing anticipatory response frameworks is their inadequate coverage and accessibility, particularly in remote and marginalized communities.

- **Limited Reach of Early Warning Systems:** Although early warning systems are a crucial component of anticipatory response frameworks, their reach remains limited, especially in rural and isolated areas. Many communities did not receive timely warnings, or the warnings were not effectively communicated due to a lack of infrastructure, such as communication networks and reliable power sources. A resident from a flood-affected area in Balochistan noted, "We didn't get any warnings about the floods until it was too late to act." This lack of comprehensive coverage leaves the most vulnerable populations exposed to the full impact of disasters without the opportunity to take preventive measures.
- **Insufficient Resource Allocation to High-Risk Areas:** The allocation of resources, including emergency supplies, disaster training, and preparedness activities, often fails to prioritize the most at-risk areas. Many high-risk regions, particularly those with poor infrastructure or challenging geographic conditions, are not adequately equipped to respond to disasters. This gap in resource allocation exacerbates existing vulnerabilities and limits the effectiveness of anticipatory measures. A community leader in

Sindh commented, "We are always the last to receive help, and by the time resources reach us, it's often too late." Addressing this weakness requires a more targeted approach to ensure that the most vulnerable communities are prioritized in disaster preparedness efforts.

### Lack of Timely and Effective Implementation:

Another critical weakness is the failure to implement existing anticipatory response frameworks in a timely and effective manner. This gap between planning and execution significantly reduces the frameworks' ability to mitigate disaster impacts.

- **Delays in Activating Response Plans:** Even where anticipatory frameworks are in place, delays in activating response plans during an emergency can lead to missed opportunities to prevent or reduce harm. Bureaucratic inefficiencies, lack of clear decision-making processes, and insufficient training of local officials often result in slow responses. A government official acknowledged, "We had the plans, but there were delays in getting them into action, which cost us valuable time." These delays can have severe consequences, particularly in fast-moving disasters like floods, where early action is crucial.
- **Incomplete Execution of Preparedness Measures:** The execution of preparedness measures, such as the pre-positioning of emergency supplies, conducting disaster drills, and mobilizing resources, is often incomplete or inconsistent. In some cases, resources are not strategically placed, or disaster drills are not conducted regularly, leading to gaps in preparedness. A local NGO worker remarked, "We were supposed to have regular drills and stockpiles of supplies, but these things didn't always happen as planned." This incomplete execution leaves communities less prepared to respond effectively when a disaster occurs.

### Insufficient Community Involvement and Ownership:

A significant weakness in the existing frameworks is the insufficient involvement of local communities in the planning and implementation of anticipatory measures. This lack of community engagement undermines the effectiveness and sustainability of the frameworks.

- **Top-Down Approach to Planning:** Many anticipatory response frameworks are developed using a top-down approach, with little input from the communities they are meant to protect. This disconnects between planners and local populations can result in frameworks that do not fully address the specific needs, vulnerabilities, or capacities of communities. A community member in Sindh observed, "The plans were made far away from us, so they didn't really reflect our reality." Without community involvement, anticipatory frameworks may fail to gain the trust and cooperation of local residents, reducing their overall effectiveness.
- **Lack of Localized Knowledge and Contextualization:** Effective disaster preparedness requires an understanding of local contexts, including geography, culture, and community dynamics. However, many existing frameworks do not adequately incorporate localized knowledge or tailor their strategies to the specific conditions of each area. A resident from a flood-prone area in Balochistan shared, "What works in one region doesn't always work here, but the plans don't take that into account." This lack of contextualization limits the relevance and applicability of anticipatory measures, making them less effective in practice.

### Limited Integration with Long-Term Development Planning:

Another key weakness is the limited integration of anticipatory response frameworks with broader long-term development planning. This narrow focus on immediate disaster response can undermine efforts to build resilience over the long term.

- **Short-Term Focus of Anticipatory Frameworks:** Many existing frameworks prioritize immediate disaster response without adequately addressing the underlying vulnerabilities that contribute to disaster risk.

This short-term focus can lead to repeated cycles of disaster and recovery, without making significant progress toward long-term resilience. A development expert noted, "We keep responding to disasters, but we're not doing enough to prevent them from becoming crises in the first place." Integrating anticipatory frameworks with development planning can help address root causes of vulnerability, such as poverty, inadequate infrastructure, and environmental degradation, thereby reducing the impact of future disasters.

- **Disconnection from Sustainable Development Goals (SDGs):** Anticipatory response frameworks are often developed in isolation from broader sustainable development initiatives, such as the SDGs. This disconnection can result in missed opportunities to align disaster preparedness with goals related to poverty reduction, health, education, and environmental sustainability. A government official in Sindh pointed out, "Our disaster plans are not always linked to our development goals, which means we're not making the most of our efforts." Strengthening the integration between disaster preparedness and sustainable development can enhance the resilience of communities and contribute to more sustainable outcomes.

### Inconsistent Coordination Among Stakeholders:

Finally, inconsistent coordination among stakeholders, including government agencies, NGOs, and community organizations, remains a significant weakness in the existing frameworks.

- **Fragmented Efforts and Duplication:** The lack of clear coordination mechanisms often leads to fragmented efforts, with different stakeholders working in silos rather than in a unified, cohesive manner. This fragmentation can result in the duplication of efforts in some areas while leaving gaps in others. A representative from a humanitarian organization observed, "We sometimes ended up doing the same work as others, while some communities received no support at all." Improving coordination is essential for ensuring that resources are used efficiently and that all communities receive the support they need.
- **Weak Communication Channels:** Effective disaster preparedness and response require robust communication channels among all stakeholders. However, communication breakdowns, particularly between different levels of government and between government agencies and NGOs, were common during the 2022 floods. These breakdowns hindered the timely sharing of information and the coordination of response efforts. A local government official remarked, "We were often working with outdated or incomplete information, which slowed down our response." Strengthening communication channels is critical for improving the overall effectiveness of anticipatory response frameworks.





Section 4:

## Conclusions

*Research Study on Effectiveness & Resilience of Humanitarian Response in Sindh and Balochistan*

The evaluation of the interventions, community capabilities, governmental support structures, and anticipatory response frameworks during the 2022 floods in Sindh and Balochistan reveals both significant achievements and critical areas for improvement in disaster preparedness and response.

### **Objective 1: Validating the Effectiveness of Interventions Aimed at Increasing Resilience Against Natural Disasters**

The interventions implemented to enhance community resilience against natural disasters, particularly the 2022 floods, demonstrated notable success in reducing vulnerability and improving adaptive capacity in affected communities. Infrastructure improvements, Disaster Risk Reduction (DRR) training, and the establishment of early warning systems all contributed to a more resilient response to the floods. However, the effectiveness of these interventions varied across regions, with remote and marginalized areas often receiving less attention and support. The success of these efforts underscores the importance of continued investment in resilience-building initiatives while also highlighting the need to address the disparities in intervention reach and impact.

### **Objective 2: Identifying Persistent Gaps Within Community Capabilities and Governmental Support Structures**

Despite the positive outcomes of resilience-building interventions, significant gaps in community capabilities and governmental support structures persisted during the 2022 floods. Critical humanitarian needs,

including health, nutrition, food security, social protection, and WASH, were not consistently met, particularly for the most vulnerable segments of the population, such as women, children, the elderly, disabled individuals, and low-income households. The inadequacy of social protection systems, poor infrastructure maintenance, and insufficient community preparedness all contributed to increased vulnerability and prolonged recovery times. Addressing these gaps is crucial for ensuring that all community members are adequately supported during emergencies and that their fundamental needs are met.

### **Objective 3: Analyzing Gaps in Preparedness and the Presence and/or Implementation of Anticipatory Response Frameworks**

The analysis of anticipatory response frameworks revealed significant weaknesses in their presence, implementation, and effectiveness. While some frameworks existed at the national and regional levels, their reach and impact were limited, particularly at the local level. The lack of timely and effective implementation of preparedness measures, inadequate community involvement, and poor coordination among stakeholders further undermined the potential of these frameworks to mitigate disaster impacts. Additionally, the insufficient integration of anticipatory response frameworks with long-term development planning limited their ability to contribute to sustained resilience and disaster risk reduction.

The evaluation highlights a clear need for a more holistic and integrated approach to disaster preparedness and response in Sindh and Balochistan. While progress has been made in building resilience and addressing immediate needs during emergencies, significant gaps remain in both community capabilities and governmental support structures. Strengthening anticipatory response frameworks, enhancing community involvement, improving coordination among stakeholders, and integrating disaster preparedness with long-term development goals are essential steps toward building more resilient communities capable of withstanding future natural disasters. Addressing these challenges will require sustained commitment, strategic investment, and a focus on equity to ensure that the most vulnerable populations are not left behind in disaster preparedness and response efforts.





## Section 5:

# Key Recommendations

### **Objective 4: Providing evidence-based recommendations, best practices, and lessons learned to stakeholders on enhancing disaster preparedness and response mechanisms.**

Based on the evaluation the following detailed recommendations are provided to address the identified gaps and enhance future disaster preparedness, response, and resilience.

#### **Strengthening Community Resilience**

##### **Expand and Enhance Disaster Risk Reduction (DRR) Training:**

- **Broaden the Reach:** Ensure that DRR training programs are more widely available, particularly in remote and marginalized communities. Tailor these programs to local contexts, addressing the specific risks and needs of each community.
- **Incorporate Practical Components:** Include hands-on training and regular disaster drills to reinforce learning and build practical skills. This should involve all community members, including women, children, the elderly, and disabled individuals.
- **Sustain and Update Training:** Establish ongoing training programs that are regularly updated to incorporate new knowledge, technologies, and practices in disaster risk management.

##### **Strengthen Infrastructure Resilience:**

- **Prioritize Maintenance and Upgrades:** Invest in the regular maintenance and upgrading of critical infrastructure, such as flood defenses, drainage systems, and transportation networks, to withstand extreme weather events.
- **Implement Nature-Based Solutions:** Incorporate nature-based solutions, such as reforestation, wetland restoration, and the construction of green infrastructure, to enhance natural flood protection and reduce the impact of future floods.

- **Ensure Equitable Resource Allocation:** Focus on improving infrastructure in the most vulnerable and underserved areas, ensuring that all communities have the necessary physical defenses against natural disasters.

#### **Improve Access to Emergency Resources:**

- **Pre-Position Supplies:** Strategically pre-position emergency supplies, including food, water, medical kits, and temporary shelters, in areas most likely to be affected by disasters. Ensure these supplies are accessible even during extreme conditions.
- **Develop Local Contingency Plans:** Encourage and support the development of localized contingency plans that are regularly updated and rehearsed. These plans should include clear roles and responsibilities, evacuation routes, and procedures for protecting vulnerable populations.

### **Enhancing Governmental Support Structures**

#### **Improve Social Protection Systems:**

- **Expand Coverage of Social Safety Nets:** Strengthen and expand social protection systems to ensure that all vulnerable populations, including low-income households, the elderly, disabled individuals, and marginalized communities, have access to financial assistance and support during and after disasters.
- **Simplify Access to Benefits:** Reduce bureaucratic barriers and simplify the process for accessing social protection benefits, ensuring that assistance is timely and easily accessible to those in need.
- **Incorporate Disaster Risk Reduction into Social Protection:** Integrate DRR principles into social protection programs, such as conditional cash transfers linked to disaster preparedness activities, to enhance resilience and reduce vulnerability.

#### **Foster Better Coordination Among Stakeholders:**

- **Establish Centralized Coordination Mechanisms:** Create or strengthen centralized coordination mechanisms at both national and regional levels to oversee disaster preparedness and response efforts. These mechanisms should facilitate communication and collaboration among government agencies, NGOs, and community organizations.
- **Develop Joint Response Plans:** Encourage the development of joint disaster response plans that involve all relevant stakeholders. These plans should clearly define roles, responsibilities, and communication channels to avoid duplication of efforts and ensure comprehensive coverage.
- **Enhance Information Sharing:** Improve information sharing between all stakeholders, including real-time data on disaster risks, ongoing response activities, and resource availability. This will help coordinate efforts and optimize the allocation of resources.

#### **Increase Government Investment in Disaster Preparedness:**

- **Prioritize Disaster Preparedness in Budgeting:** Allocate sufficient resources in government budgets specifically for disaster preparedness, including funding for early warning systems, infrastructure improvements, and capacity-building initiatives.
- **Support Local Governments:** Provide financial and technical support to local governments to enhance their capacity to implement disaster preparedness and response measures. This includes training local officials, upgrading local infrastructure, and improving emergency response capabilities.
- **Monitor and Evaluate Preparedness Efforts:** Establish regular monitoring and evaluation processes to assess the effectiveness of disaster preparedness initiatives. Use these assessments to make necessary adjustments and improve future preparedness efforts.

## Strengthening Anticipatory Response Frameworks

### Expand and Enhance Early Warning Systems:

- **Improve Coverage and Reach:** Expand the coverage of early warning systems to ensure they reach all communities, particularly those in remote and high-risk areas. This includes investing in communication infrastructure and ensuring that warnings are accessible in local languages and formats.
- **Provide Clear and Actionable Warnings:** Ensure that early warnings are specific, clear, and provide actionable guidance. Communities should receive detailed information on the expected severity of the disaster, recommended actions, and available resources.
- **Integrate Traditional Knowledge:** Incorporate traditional knowledge and community-based early warning practices into formal systems. This can enhance the relevance and effectiveness of warnings in local contexts.

### Strengthen the Implementation of Anticipatory Measures:

- **Reduce Bureaucratic Delays:** Streamline decision-making processes to ensure that anticipatory measures, such as activating response plans and distributing resources, are implemented promptly when disaster warnings are issued.
- **Regularly Conduct Disaster Drills:** Institutionalize regular disaster drills at the community, regional, and national levels. These drills should simulate various disaster scenarios and involve all relevant stakeholders to ensure readiness and identify potential gaps in response plans.
- **Pre-Position Resources Strategically:** Ensure that emergency supplies are strategically pre-positioned in areas most likely to be affected by disasters. These stockpiles should be regularly inspected, rotated, and replenished to maintain readiness.

### Enhance Community Involvement and Ownership:

- **Involve Communities in Planning:** Actively involve local communities in the development and implementation of anticipatory response frameworks. This includes consulting with community members on their needs, vulnerabilities, and local knowledge.
- **Empower Local Leaders:** Train and empower local leaders to take ownership of disaster preparedness efforts. This can include establishing community-based disaster management committees that lead local preparedness activities and coordinate with external agencies.
- **Build Trust Through Transparency:** Increase transparency in the planning and execution of anticipatory measures. Communities should be informed about the strategies and resources available, and their input should be valued and integrated into the planning process.

### Integrate Anticipatory Frameworks with Long-Term Development Planning:

- **Align with Sustainable Development Goals (SDGs):** Ensure that anticipatory response frameworks are aligned with broader development goals, such as the SDGs. This integration will help address the root causes of vulnerability and build long-term resilience.
- **Promote Risk-Informed Development:** Incorporate disaster risk reduction into all development planning and projects. This includes conducting risk assessments for new infrastructure, land use planning, and economic development initiatives to ensure they contribute to resilience.
- **Focus on Building Resilient Livelihoods:** Support initiatives that enhance the resilience of livelihoods, particularly in sectors like agriculture and fisheries that are highly vulnerable to natural disasters. This can include promoting climate-smart agriculture, improving access to financial services, and supporting diversification of income sources.



## Cross-Cutting Recommendations

### Prioritize the Needs of Vulnerable Populations:

- **Targeted Interventions:** Design and implement disaster preparedness and response interventions that specifically target the most vulnerable populations, including women, children, the elderly, disabled individuals, and low-income households.
- **Strengthen Protection Mechanisms:** Enhance protection mechanisms during emergencies, including establishing safe spaces, providing psychosocial support, and ensuring that protection issues are integrated into all disaster response activities.
- **Monitor and Address Gender-Based Vulnerabilities:** Pay special attention to the gender-specific impacts of disasters and ensure that all interventions are gender-sensitive and address the unique needs and challenges faced by women and girls.

### Foster Continuous Learning and Adaptation:

- **Document and Share Lessons Learned:** Establish mechanisms for documenting and sharing lessons learned from disaster preparedness and response activities. This can include after-action reviews, community feedback sessions, and knowledge exchange forums.
- **Adapt Frameworks Based on Feedback:** Regularly update and adapt anticipatory response frameworks based on feedback from communities, evaluation results, and emerging best practices. This continuous improvement approach will help ensure that frameworks remain relevant and effective.
- **Promote Innovation in Disaster Risk Management:** Encourage the adoption of innovative approaches and technologies in disaster risk management, such as using mobile apps for early warning dissemination, deploying drones for rapid assessments, and leveraging big data for predictive analytics.

### Strengthen International Cooperation and Support:

- **Leverage International Expertise and Resources:** Seek technical assistance and resources from international organizations, donor agencies, and regional bodies to enhance national and local disaster preparedness capacities.
- **Engage in Regional Collaboration:** Participate in regional disaster preparedness and response initiatives, such as sharing early warning data, coordinating cross-border disaster response efforts, and learning from neighboring countries' experiences.
- **Advocate for Climate Action:** Advocate for stronger global climate action to address the root causes of increasing disaster risks, including reducing greenhouse gas emissions and supporting adaptation efforts in vulnerable countries.



# Annexes





## Annex 1: ToRs

### *Terms of Reference (TOR) for Hiring a Consultant Research Study on Effectiveness & Resilience of Humanitarian Response in Sindh and Balochistan*

#### **1. Background:**

Pakistan ranks tenth as the most disaster-prone in the World Risk Report 2022, and eighth as most affected by climatic hazards from 2000 to 2019 in the latest Climate Risk Index (2021). It is prone to a variety of hydro-meteorological and geologic hazards, particularly floods, earthquakes, cyclones, and droughts. Extreme weather events had caused deaths, economic losses and devastation to the lives and livelihoods of people and contributed to the food insecurity of vulnerable populations. Climate change continues to exacerbate the frequency and intensity of these events, threatening the livelihoods, health, and economic stability of millions. The regions of Sindh and Baluchistan are particularly susceptible, often bearing the brunt of these disasters. In response, numerous organizations, including Action Against Hunger-Pakistan, have been actively implementing projects aimed at bolstering the resilience of communities to withstand and recover from these natural disasters.

The rationale behind these projects was grounded in the understanding that building local capacity and infrastructure is pivotal to enhancing community resilience. Such initiatives have focused on several key areas: improving water sanitation and hygiene facilities to ensure clean and accessible water during floods, establishing and enhancing access to health and nutrition services to manage and mitigate the impact of disasters on community health, promoting sustainable agricultural practices to ensure food availability during emergencies, building the capacity of government and community institutions on disaster management to improve response capability and transitioning the disaster management architecture towards pro-active disaster management rather than reactive.

Despite the urgency and investment in these areas, there remains a significant gap in documented evidence regarding the effectiveness and impact of these resilience-building programs. There is a pressing need to generate empirical data to validate the approaches taken and to inform future interventions. Action Against Hunger-Pakistan is seeking the expertise of a consultant firm to conduct a research study to evaluate the effectiveness of implemented resilience-building programs aimed at mitigating these impacts.

## 2. Overall Objectives:

The consultant will assist in:

- Validating the effectiveness of interventions aimed at increasing resilience against natural disasters taking in to account the 2022 floods.
- Identifying persistent gaps within community capabilities and governmental support structures including addressing critical humanitarian needs during emergencies including health, nutrition, food security, social protection, WASH along with protection (as crossing cutting) issues/challenges faced by vulnerable segments of the community during emergencies.
- Analyzing gaps in preparedness and presence and/or implementation of any anticipatory response framework at government and other stakeholders level is also included
- Providing evidence-based recommendations, best practices and lessons learned to stakeholders on enhancing disaster preparedness and response mechanisms.

## 3. Scope of Work:

The consultant will:

- Develop a robust evaluation framework with specific indicators for success, considering both quantitative and qualitative metrics.
- Collect data through surveys, interviews, and focus groups with community members, local leaders, government stakeholders and humanitarian actors who are partners of DEC.
- Review secondary data including government publications and existing reports, including but not limited to; project performance reports, baseline, endline, follow-up studies etc.
- Analyze the sustainability and long-term benefits of the interventions.
- Evaluate the capacity of local and regional government bodies to provide humanitarian support.
- Provide recommendations for future investments and structural changes to enhance resilience.

## 4. Deliverables:

- A comprehensive evaluation framework, success indicator and metrics, key evaluation questions, research methodology, evaluation timeline, data collection tools, analysis plan and ethical consideration.
- A detailed report on the findings from primary and secondary data collection.
- Strategic recommendations for enhancing resilience and preparedness strategies.
- Conduct a debriefing session on the key findings of the research study and provide a presentation to key stakeholders.

## 5. Timeline:

- The consultancy will begin by mid-June 2024 and conclude with the final report and presentation by the end of August 2024.



Annex 2:  
**Study Tools**

**Tool 1: Household Survey (Beneficiaries)**

**Instructions for Interviewer:**

- Please introduce clearly the objective and purpose of this survey before starting it.
- Please make sure that all questions are covered in the discussion
- Please inform the participants that the survey will take around 45-60 minutes.

**Consent:** *We are conducting this study in your area to better understand the project. This will help us to better serve the community in future projects. We have some discussion points to obtain your views on them. Your input will remain anonymous. Your participation is voluntary and you can decide to leave anytime during the discussion. In the discussion, if you would not want to answer any particular question, it is completely okay. However, we hope that you will participate since your views are important.*

**Do you have any questions?**

*If you allow, may I start the discussion*                      Yes (1)                      No (2)

S1. Dated: \_\_\_\_\_ (Day) / \_\_\_\_\_ (Month) / 2024

S2 Interviewer name: \_\_\_\_\_

### Section A DEMOGRAPHICS

1. Province	2. District	3. Tehsil / Taluka	4. Village

### Section B RESPONDENT PROFILE

5. Respondent Name	6. Age (in years)	7. Gender	8. Nationality
		1. Male 2. Female	1. Pakistani 2. Afghan <sup>11</sup>
9. Phone Number	10. Education	11. Do you have any disability?	
	1. No education 2. Primary (5 <sup>th</sup> grade) 3. Elementary (8 <sup>th</sup> grade) 4. Matriculation (10 <sup>th</sup> grade) 5. Other specify (grade) .....	1. Yes 2. No (If no, skip the next question)	
11.1	Do you have difficulty in seeing, even if wearing glasses?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	
11.2	Do you have difficulty in hearing, even if using a hearing aid?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	
11.3	Do you have difficulty in walking or climbing steps?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	
11.4	Do you have difficulty (with self care such as) washing all over or dressing?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	
11.5	Do you have difficulty remembering or concentrating?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	
11.6	Do you have difficulty communicating, for example understanding or being understood?	1. No difficulty 2. Yes, some difficulty 3. Yes, a lot of difficulty 4. Cannot do at all	

<sup>11</sup>In case of Pishin and Killa Saifullah for ACF

12. Could you please let us know if you have received one or more of these assistance?	Sector 1	Sector 2	Sector 3
	Food Security and Livelihoods	Health and Nutrition	Disaster Risk Reduction
Districts	1. Khairpur 2. Jafferabad 3. Sohbat Pur	1. Khairpur 2. Jafferabad 3. Sohbat Pur 4. Pishin 5. Killa Saifullah	1. Khairpur 2. Jafferabad 3. Sohbat Pur 4. Pishin 5. Killa Saifullah 6. Mirpur Khas 7. Thatta

Section A: Food Security and Livelihoods		
1. A	Livelihood Recovery to Pre-Flood Levels: Have your household's livelihoods returned to the same level as they were before the floods?	<ul style="list-style-type: none"> <li>Yes (1)</li> <li>No (2)</li> </ul>
2. A	Ability to Continue Cropping Cycle Without Assistance: Are you able to continue your cropping cycle without any external assistance?	<ul style="list-style-type: none"> <li>Yes, without any assistance (1)</li> <li>Yes, but with minimal assistance (2)</li> <li>No, I still require significant assistance (3)</li> </ul>
3. A	Ability to Protect Livelihoods in Future Disasters: In the event of a future disaster, do you believe your household is capable of protecting and preserving your livelihoods?	<ul style="list-style-type: none"> <li>Yes, we are well-prepared (1)</li> <li>Somewhat, but we may need some support (2)</li> <li>No, we are not prepared (3)</li> </ul>
4. A	Diversification of Livelihoods: Since the floods, have you diversified your household's livelihoods (e.g., engaging in new types of work or income-generating activities)?	<ul style="list-style-type: none"> <li>Yes, we have diversified significantly (1)</li> <li>Yes, we have made some diversification (2)</li> <li>No, we have not diversified (3)</li> </ul>
5. A	Adoption of Climate-Smart or Resilient Agricultural Practices: Have you adopted any agricultural practices that are climate-smart or resilient (e.g., drought-resistant crops, water conservation techniques)?	<ul style="list-style-type: none"> <li>Yes, we have adopted several practices (1)</li> <li>Yes, we have adopted a few practices (2)</li> <li>No, we have not adopted any such practices (3)</li> </ul>
Section B: Health, Nutrition, MNCH		
6. B	Adoption of Preventive Health Practices: After the awareness campaigns, do you regularly boil water before drinking it to prevent waterborne diseases?	<ul style="list-style-type: none"> <li>Yes, always (1)</li> <li>Sometimes (2)</li> <li>No, never (3)</li> </ul>
7. B	Adoption of Preventive Health Practices: Do you and your household members wash your hands with soap before eating and after using the toilet?	<ul style="list-style-type: none"> <li>Yes, always (1)</li> <li>Sometimes (2)</li> <li>No, never (3)</li> </ul>
8. B	Awareness and Practice of Nutritional Behaviors: Do you believe that breastfeeding can help prevent malnutrition in infants?	<ul style="list-style-type: none"> <li>Yes, I strongly believe this (1)</li> <li>I am somewhat aware of this (2)</li> <li>No, I am not aware of this (3)</li> </ul>

9. B	Awareness and Practice of Nutritional Behaviors: Are you currently practising exclusive breastfeeding for infants under 6 months?	<ul style="list-style-type: none"> <li>▪ Yes, exclusively (1)</li> <li>▪ Partially, along with other foods (2)</li> <li>▪ No, not practicing breastfeeding (3)</li> </ul>
10. B	Health-Seeking Behaviors in Response to Illness: When a child in your household shows signs of illness (e.g., diarrhea, fever), do you seek medical advice from a health facility or health worker?	<ul style="list-style-type: none"> <li>▪ Yes, immediately (1)</li> <li>▪ Yes, but only if the illness persists (2)</li> <li>▪ No, I rely on home remedies or do not seek help (3)</li> </ul>
11. B	Community Preparedness for Future Shocks: Do you feel confident that your household can continue these healthy behaviors (e.g., safe water practices, proper nutrition) even in the event of future floods or disasters?	<ul style="list-style-type: none"> <li>▪ Yes, very confident (1)</li> <li>▪ Somewhat confident (2)</li> <li>▪ No, not confident (3)</li> </ul>

### Section C: Disaster Risk Reduction

12. C	Past Experience: Has your household experienced any climate related disasters in the past?- Yes - No	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1) (skip next two questions)</li> </ul>
13. C	Past Experience: If yes, how many times in the past five years?	<ul style="list-style-type: none"> <li>▪ Once (1)</li> <li>▪ 2-3 times (2)</li> <li>▪ More than 3 times (3)</li> </ul>
14. C	Past Experience: How did your household respond to the last climate-related disaster you experienced?	<ul style="list-style-type: none"> <li>▪ Stayed at home (1)</li> <li>▪ Evacuated to a safe location (2)</li> <li>▪ Sought help from neighbors/community</li> <li>▪ Other (please specify)(3)</li> </ul>
15. C	Awareness, Knowledge and Engagement: Do you know what is a natural disaster?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
16. C	Awareness, Knowledge and Engagement: Do you know that communities can prepare themselves to withstand natural disasters?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
17. C	Awareness, Knowledge and Engagement: Are you aware of the potential climate change-related disasters that could affect your area?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
18. C	Awareness, Knowledge and Engagement: Do you know the emergency contact numbers for local disaster response agencies?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
19. C	Awareness, Knowledge and Engagement: Are you aware of the Community-Based Disaster Risk Management (CBDRM) initiatives in your community?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
20. C	Awareness, Knowledge and Engagement: Have you participated in any CBDRM activities or training sessions?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
21. C	Awareness, Knowledge and Engagement: Do you believe that the community's involvement in CBDRM has increased awareness about disaster risks?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
22. C	Preparedness: Does your community have a disaster preparedness committee?	<ul style="list-style-type: none"> <li>▪ Yes (0) (if yes, ask for its members)</li> <li>▪ No (1)</li> </ul>



23. C	Preparedness: Does your household have access to early warning systems for disasters?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
24. C	Preparedness: Does your community have a disaster preparedness plan?	<ul style="list-style-type: none"> <li>▪ Yes (0) (if yes, ask where we can get its copy)</li> <li>▪ No (1)</li> </ul>
25. C	Preparedness: Does your community have an emergency supply kit (including items like water, non-perishable food, flashlight, batteries, first aid supplies, etc.)?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
26. C	Preparedness: Have you and your household members participated in any disaster preparedness training related to climate change?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
27. c	Preparedness: Have you participated in any community disaster drills or simulations?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
28. C	Preparedness: Have you identified a safe location to go to in case of a disaster?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
29. C	Preparedness: Have you taken any steps to adapt your household to the effects of climate change (e.g., improved water storage, flood defences)?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
30. C	Preparedness: Do you feel more prepared to respond to potential threats due to community initiatives?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
31. C	Resilient Infrastructure: Does your community have disaster resilient infrastructure such as schools, health, water facilities etc ?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ Partially Yes (2)</li> <li>▪ No (3)</li> <li>▪ Not Applicable (4)</li> </ul>
32. C	Resilient Infrastructure: Has your community made any upgrades to infrastructure (such as schools, health, water facilities etc) to withstand stressors and hazards (e.g., reinforcing roofs, flood barriers)?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ Partially Yes (2)</li> <li>▪ No (3)</li> <li>▪ Not Applicable (4)</li> </ul>
33. C	Resilient Infrastructure: Will public infrastructure (such as schools, health, water facilities etc) will continue to functional during natural disasters?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ Partially Yes (2)</li> <li>▪ No (3)</li> <li>▪ Not Applicable (4).</li> </ul>
34. C	Resilient Infrastructure: Will most of the public infrastructure (such as schools, health, water facilities etc) will be fully functional after one week of natural disasters?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ Partially Yes (2)</li> <li>▪ No (3)</li> <li>▪ Not Applicable (4)</li> </ul>
35. C	Risk Mitigation: Has your household implemented any strategies to minimize potential risks and hazards?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
36. C	Risk Mitigation: Are you aware of any community initiatives focused on risk mitigation?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
37. C	Risk Mitigation: Are you part of a community or neighbourhood group focused on disaster preparedness?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
38. C	Risk Mitigation: Do you know the location of the nearest emergency shelter?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>
39. C	Risk Mitigation: Have you received any information from local authorities about disaster preparedness in the past year?	<ul style="list-style-type: none"> <li>▪ Yes (0)</li> <li>▪ No (1)</li> </ul>

40. C	Risk Mitigation: Do you feel that local authorities provide adequate support for disaster preparedness and response?	<ul style="list-style-type: none"> <li>• Yes (0)</li> <li>• No (1)</li> </ul>
41. C	Environmental Sustainability: Does your household practice any measures to promote environmental sustainability (e.g., recycling, water conservation)?	<ul style="list-style-type: none"> <li>• Yes (0)</li> <li>• No (1)</li> </ul>
42. C	Environmental Sustainability: Are there community-led initiatives promoting environmental sustainability?	<ul style="list-style-type: none"> <li>• Yes (0)</li> <li>• No (1)</li> </ul>
43. C	Environmental Sustainability: Do you believe that these sustainability practices contribute to the long-term resilience of your community?	<ul style="list-style-type: none"> <li>• Yes (0)</li> <li>• No (1)</li> </ul>
44. C	Risk Perception: How likely do you think it is that your household will be affected by a climate-related disaster in the next five years such as floods or drought?	<ul style="list-style-type: none"> <li>• Very likely (1)</li> <li>• Somewhat likely (2)</li> <li>• Not likely (3)</li> <li>• Unsure (4)</li> </ul>
45. C	Risk Perception: How prepared do you feel your household is to handle a climate-related disaster?	<ul style="list-style-type: none"> <li>• Very prepared (1)</li> <li>• Somewhat prepared (2)</li> <li>• Not prepared (3)</li> <li>• Unsure (4)</li> </ul>
46. C	Access to Social Protection for Disaster Preparedness: Do you have access to any social protection programs (e.g., cash transfers, food assistance) that you can rely on in anticipation of a disaster?	<ul style="list-style-type: none"> <li>• Yes, I am enrolled and can access these programs when needed (1)</li> <li>• Yes, but I am unsure if I can access them when needed (2)</li> <li>• No, I do not have access to any social protection programs</li> </ul>
47. C	Communal or Household Savings Strategies: Does your household or community have a savings strategy (e.g., communal savings group, personal savings) that you can utilize to reduce the impact of a disaster or shock?	<ul style="list-style-type: none"> <li>• Yes, we have a well-established savings strategy (1)</li> <li>• Yes, but the strategy is not fully developed or reliable (2)</li> <li>• No, we do not have any savings strategy in place (3)</li> </ul>
48. C	Do you want to share anything else	<ul style="list-style-type: none"> <li>• Yes (0)</li> <li>• No (1)</li> </ul> <p>If yes, please elaborate</p>

**Pictures Taken?**
**Yes**
**No**




Tool 2:

# KII - ACF and DEC

Dated: \_\_\_\_\_(Day) / \_\_\_\_\_ (Month) / 2024

## Instructions for Interviewer

- Please introduce clearly the objective and purpose of this interview before starting it.
- Please make sure that all questions are covered in the discussion.
- Please inform the participants that the interview will take around 45-60 minutes.

**Consent:** *We are conducting this study in your area to better understand the project. This will help us to better serve the community in future projects. We have some discussion points to obtain your views on them. Your input will remain anonymous. Your participation is voluntary and you can decide to leave anytime during the discussion. In the discussion, if you would not want to answer any particular question, it is completely okay. However, we hope that you will participate since your views are important.*

### **Do you have any questions?**

*If you allow, may I start the discussion*

Yes (1)

No (2)

Interview Date	
Interviewer Name	
Interviewee Name	
Designation	
Department	
Gender	
Location	

### Section 1:

**Q.1: Can you please tell me about yourself and your role in the organization?**

**Probe:** Can you briefly describe your role and responsibilities within the project? How closely have you been involved with the project and its various components? How has your role evolved throughout the course of the project?

### Section 2: Effectiveness of Interventions

**Q2: Can you describe the main interventions implemented in your community to increase resilience against natural disasters, specifically floods?**

**Probe:** Which organizations were involved in these interventions?

**Probe:** What were the primary objectives of these interventions?

**Q3: How effective do you think these interventions were in increasing the community's resilience during the 2022 floods?**

**Probe:** Can you provide specific examples of successful interventions?

**Probe:** Were there any particular strategies that worked exceptionally well?

**Q4: Were there any interventions that you feel were not effective? If so, why?**

**Probe:** What were the challenges or obstacles faced during the implementation?

**Probe:** How could these interventions be improved?

**Q5: How did the community members perceive these interventions?**

**Probe:** Were there any feedback or suggestions from the community?

**Probe:** How was this feedback collected and addressed?

### Section 3: Persistent Gaps and Challenges

**Q6: What are the most persistent gaps within the community's capabilities to respond to natural disasters like floods?**

**Probe:** Are there specific areas where the community needs more support or resources?

**Probe:** How have these gaps impacted the community during past disasters?

**Q7: How would you assess the level of governmental support during the 2022 floods?**

**Probe:** What specific forms of support were provided by the government?

**Probe:** Were there any shortcomings or areas where government support was lacking?

**Q8: What are the critical humanitarian needs that emerged during the 2022 floods in the areas of health, nutrition, food security, social protection, and WASH?**

**Probe:** Can you provide examples of how these needs were addressed?

**Probe:** Were there any needs that were not adequately met?

**Q9: How did vulnerable segments of the community, such as women, children, the elderly, and people with disabilities, fare during the 2022 floods?**

**Probe:** What specific challenges did these groups face?

**Probe:** Were there any targeted interventions to support these vulnerable groups?

**Q10: Are there any protection issues or challenges that emerged during the 2022 floods?**

**Probe:** How were these issues addressed?

**Probe:** What measures can be taken to improve protection for vulnerable groups in future disasters?

#### Section 4: Recommendations and Future Planning

**Q11: Based on your experience, what recommendations would you make to improve the community's resilience against future natural disasters?**

**Probe:** What specific strategies or interventions should be prioritized?

**Probe:** How can community capabilities be strengthened?

**Q12: How can governmental support structures be enhanced to better address critical humanitarian needs during emergencies?**

**Probe:** What specific areas need improvement?

**Probe:** Are there any successful models or examples that can be replicated?

**Q13: What role do you think community-based organizations and local leaders should play in disaster risk reduction and response?**

**Probe:** How can their involvement be increased?

**Probe:** What support do they need to be more effective?

**Q14: Is there anything else you would like to add regarding the effectiveness of interventions and the challenges faced during the 2022 floods?**

**Probe:** Are there any other key points or issues that have not been covered?





## Tool 3: FGD with Communities

Dated: \_\_\_\_\_ (Day) / \_\_\_\_\_ (Month) / 2024

### Instructions for Interviewer

- Please introduce clearly the objective and purpose of this discussion before starting it

**Consent:** *We are conducting this study in your area to better understand the project. This will help us to better serve the community in future projects. We have some discussion points to obtain your views on them. Your input will remain anonymous. Your participation is voluntary and you can decide to leave anytime during the discussion. In the discussion, if you would not want to answer any particular question, it is completely okay. However, we hope that you will participate since your views are important.*

**Do you have any questions?**

*If you allow, may I start the discussion*

Yes (1)

No (2)

<b>FGD Moderator Name</b>	
<b>FGD Note Taker</b>	
<b>District</b>	
<b>Tehsil</b>	
<b>Village</b>	
<b>Respondent group</b>	1. Women 2. Men
<b># of FGD participants</b>	Pakistan: Afghan Total:
<b>Any other information related to respondent e.g. widow, disability</b>	

## Introduction

**Q1: Can you please tell about your community.**

**Probe:** ACF activities in the area

## Section 1: Validating the Effectiveness of Interventions

**Q2: What interventions have been implemented in your community to increase resilience against natural disasters, specifically the 2022 floods?**

**Probe:** Can you describe specific projects or programs that were carried out?

**Probe:** Who implemented these interventions (government, NGOs, community-based organizations)?

**Q3: How effective were these interventions in protecting your community during the 2022 floods?**

**Probe:** What aspects of the interventions were most helpful?

**Probe:** Were there any areas where the interventions fell short?

**Q4: Can you share any examples of how these interventions helped you or your neighbors during the floods?**

**Probe:** Were there any noticeable changes in preparedness or response?

**Probe:** Did these interventions lead to any long-term benefits?

**Q5: What improvements or changes would you suggest for these interventions to be more effective in the future?**

**Probe:** Are there specific resources or support that you think are lacking?

**Probe:** How can the community be more involved in these interventions?

## Section 2: Identifying Persistent Gaps and Critical Humanitarian Needs

**What are the main gaps in your community's ability to respond to natural disasters like floods?**

**Probe:** Are there any areas where you feel particularly vulnerable?

**Probe:** What resources or support do you find lacking?

**Q6: How well did governmental support structures perform during the 2022 floods?**

**Probe:** What kind of support did you receive from the government?

**Probe:** Were there any delays or challenges in receiving this support?

**Q7: What critical humanitarian needs were most urgent during the floods in terms of health, nutrition, food security, social protection, and WASH?**

**Probe:** Can you describe specific challenges you faced in these areas?

**Probe:** How were these needs addressed, if at all?

**Q8: What protection issues or challenges did vulnerable segments of the community face during the 2022 floods?**

**Probe:** Were there any groups (e.g., women, children, elderly, disabled) that were particularly affected?

**Probe:** How were their needs different from the rest of the community?

**Q9: What role did community capabilities play in managing the crisis during the floods?**

**Probe:** Were there community-led initiatives or responses that were effective?

**Probe:** How can community capabilities be strengthened for future disasters?

**Q10: What additional support or resources do you think are necessary to better address these gaps and humanitarian needs in future emergencies?**

**Probe:** Are there specific types of aid or interventions that you feel are missing?

**Probe:** How can coordination between the community, government, and NGOs be improved?

## Conclusion

**Q11: Is there anything else you would like to share about your experiences during the 2022 floods and the interventions implemented?**

**Probe:** Any additional thoughts on how to improve disaster resilience in your community?







Tool 4:

# KII Government Officials

Dated: / / 2024

## Instructions for Interviewer:

- The interview guide covers Government Officials and other stakeholders who were engaged as part of this project.
- Please introduce clearly the objective and purpose of this interview before starting it.
- Please inform the participants that the KII will take around 40-45 minutes.

**Consent:** We are conducting this study in your area to better understand the project. This will help us to better serve the community in future projects. We have some discussion points to obtain your views on them. Your input will remain anonymous. Your participation is voluntary and you can decide to leave anytime during the discussion. In the discussion, if you would not want to answer any particular question, it is completely okay. However, we hope that you will participate since your views are important.

### Do you have any questions?

If you allow, may I start the discussion

Yes (1)

No (2)

Interviewer Name	
Name of the Interviewee	
Gender of the Interviewee	1. Male                      2. Female
Job title of the Interviewee	
Type of Interviewee e.g. Government Official, NGO staff	
Name of Organization	
Contact Details (Phone)	
Contact Details (email)	

### Section 1: Introduction

**Q1: As a key government official, could you please let us know about your department, and its role related to climate change / flood response?**

**Probe:** Explore department mandate as well as respondent role in the department.

### Section 2: Effectiveness of NGO Interventions

**Q2: How would you describe the overall effectiveness of NGO interventions aimed at increasing community resilience against natural disasters, particularly in the context of the 2022 floods?**

**Probe:** Can you provide specific examples of successful interventions?

**Q3: Which specific NGO initiatives have been most impactful in your opinion, and why?**

**Probe:** Are there any particular areas (e.g., WASH, health, nutrition) where these initiatives have excelled?

**Q4: How have NGO interventions complemented governmental efforts in disaster risk reduction and response?**

**Probe:** Can you describe any successful collaborations or partnerships?

### Section 3: Persistent Gaps within Community Capabilities and Governmental Support Structures

**Q5: What are the main gaps you have observed within community capabilities to prepare for and respond to natural disasters?**

**Probe:** How do these gaps differ across various segments of the community (e.g., gender, age, socioeconomic status)?

**Q6: What challenges have you identified in the existing governmental support structures during emergencies such as the 2022 floods?**

**Probe:** Are there specific areas where the support was lacking (e.g., coordination, resource allocation, infrastructure)?

#### Section 4: Recommendations and Future Actions

**Q7: What additional measures do you think are necessary to improve community resilience against natural disasters?**

**Probe:** Are there specific policies or programs that should be prioritized?

**Q8: How can the coordination between NGOs and government agencies be enhanced to better address disaster preparedness and response?**

**Probe:** What mechanisms or platforms could facilitate better coordination and communication?

**Q9: Are there any innovative approaches or best practices from other regions or countries that you think could be adapted to improve disaster resilience in your area?**

**Probe:** Can you provide examples of such practices?

**Q10: What role do you see for community-based organizations and local leaders in disaster risk reduction and response?**

**Probe:** How can their involvement be strengthened and supported?

#### Additional Comments

**Q11: Do you have any additional comments or suggestions regarding disaster risk reduction, NGO interventions, or governmental support structures?**

**Probe:** Are there any other areas we haven't covered that you think are important to address?





Collaboration with

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