APP
ASIAN PREPAREDNESS PARTNERSHIP

RDO

NHN

PARTICIPATORY MULTI-HAZARDS RISK & VULNERABILITY ASSESSMENT

VILLAGE BISHONAI & MALAKPUR



VC:
MALAKPUR

Tehsil:
GADEZAI

District:
BUNER

Preface

Climate change has become an immediate and growing challenge for vulnerable communities across Pakistan, particularly in mountainous regions where climate-induced hazards are increasing in frequency and intensity. In District Buner, the 2025 flash flood severely affected Village Bishonai and Malakpur, causing extensive damage to residential structures, public infrastructure, agricultural lands, irrigation networks, water supply systems, livelihoods, and essential community assets. This disaster highlighted the urgent need for locally driven disaster risk management, climate adaptation planning, and resilience-building measures that address both current vulnerabilities and future climate risks.

In response to these challenges, the National Humanitarian Network (NHN) in collaboration with Rural Development Organization, with financial support from Promoting Resilience Preparedness (PRP), conducted Multi-Hazard Vulnerability and Risk Assessments (MHVRAs) in Village Bishonai and Malakpur in consultation with the District Disaster Management Authority (DDMA) Buner. Based on the findings of these assessments, this report has been developed as a strategic and practical framework to strengthen community resilience. The report emphasizes risk-informed decision-making, preparedness, adaptive capacity, and inclusive interventions that prioritize women, children, older persons, persons with disabilities, and economically vulnerable households.

This report provides an integrated pathway for reducing disaster risks and enhancing climate resilience in Bishonai and Malakpur. It combines structural and non-structural disaster risk reduction measures, climate-resilient infrastructure development, ecosystem-based adaptation, livelihood strengthening, improved water and sanitation management, and community-based preparedness mechanisms. The proposed interventions address both sudden-onset hazards, such as flash floods, and gradual climate stresses, including changing rainfall patterns, land degradation, declining water availability, and ecosystem deterioration.

This report serves as a practical roadmap for Village Bishonai and Malakpur, government institutions, humanitarian and development partners, civil society organizations, and other stakeholders. Through coordinated implementation, the report aims to reduce disaster risks, strengthen local capacities, protect livelihoods, and promote a safer and more climate-resilient future for the communities.

Table of Content

Content	Page
Preface	2
Project Background	6
Introduction to the Mulri-Hazard Risk & Vulnerability Assessment of Village Bishonai & Malakpur	6
Objectives	6
Methodology Adopted for the Development of the Report	6
General Profile of Villages	7
Multi Hazard Vulnerability Assessment	10
Household Decision Making	15
Venn Diagram (Social and Institutional Network Assessment)	16
Flood Risk Analysis	18
Community's Coping Capacities and Institutional Network	21
Action Plan	22
Glimpses of the Assessment Consultation Process	26

List of Figures:

Figure 1: Social map of village Bishonai & Malakpur
Figure 2: Season-wise temperature of village Bishonai & Malakpur
Figure 3: Venn diagram showing the stakeholder relationship with the community

List of Tables:

Table 1: Historical profile
Table 2: Seasonal calendar
Table 3: Vulnerability Matrix
Table 4: Household Decision-Making Matrix
Table 5: Social and Institutional Network Matrix
Table 6: Adaptation Pathways

Acronyms

NHN	National Humanitarian Network	NDCs	Nationally Determined Contributions
PRP	Promoting Resilience Preparedness	NDMA	National Disaster Management Authority
CSOs	Civil Society Organizations	PDMA	Provincial Disaster Management Authority
APP	Asian Preparedness Partnership	PRP	Promoting Resilience Preparedness
DDMA	District Disaster Management Authority	PHED	Public Health Engineering Department
DDMU	District Disaster Management Unit	PMD	Pakistan Meteorological Department
DEOC	District Emergency Operations Center	PRCS	Pakistan Red Crescent Society
FGD	Focus Group Discussion	DRR	Disaster Risk Reduction
KIIs	Key Informant Interviews	RCP	Representative Concentration Pathway
KP	Khyber Pakhtunkhwa	TEVTA	Technical Education and Vocational Training Authority
KP-CCAP	Khyber Pakhtunkhwa Climate Change Action Plan	SOPs	Standard Operating Procedures
MoPDSI	Federal Ministry of Planning, Development and Special Initiatives	TMA	Tehsil Municipal Authority
NAP	National Adaptation Plan	VC	Village Council
RDO	Rural Development Organization	CR-WASH	Climate Resilient - Water, Sanitation and Hygiene

Executive Summary

Village Bishonai & Malakpur, located in District Buner, Khyber Pakhtunkhwa, are highly exposed to climate- induced hazards due to its mountainous terrain, dependence on climate-sensitive livelihoods, and limited adaptive capacities. The devastating flash flood of 2025 caused widespread destruction to houses, roads, bridges, irrigation channels, agricultural lands, water supply systems, and other critical infrastructure. The event resulted in major livelihood losses and revealed significant gaps in preparedness, infrastructure resilience, and access to essential services. Increasing rainfall variability, extreme precipitation events, soil erosion, landslides, and environmental degradation continue to intensify risks faced by the community, particularly vulnerable groups including women, children, older persons, persons with disabilities, and economically marginalized households.

This report has been developed through a participatory and community-centered approach led by the Asian Preparedness Partnership (APP). The report is based on a comprehensive Multi-Hazard Vulnerability and Risk Assessment (MHVRA) conducted with community members, local leadership, government departments, and relevant stakeholders. The assessment identified major hazards, exposure patterns, vulnerabilities, existing capacities, and priority actions required to enhance resilience.

It proposes integrated disaster risk reduction and climate adaptation interventions at household, community, institutional, and ecosystem levels. Priority actions include strengthening community-based early warning systems, improving evacuation preparedness, rehabilitating climate-resilient infrastructure, promoting climate-smart agriculture, protecting watersheds and forests, improving water resource management, strengthening climate-resilient WASH services, and enhancing inclusive community participation.

The report recognizes that long-term resilience requires addressing the underlying drivers of vulnerability through ecosystem restoration, improved governance, strengthened community institutions, and coordinated action among stakeholders. By combining disaster preparedness, sustainable resource management, and climate adaptation measures, the plan provides a structured roadmap for enhancing climate resilience in Village Bishonai & Malakpur. Successful implementation will require continued collaboration among communities, government institutions, humanitarian organizations, and development partners.

1. Project Background:

Under Outcome 4 of the "Strengthening Locally Led Disaster Preparedness and Climate Resilience at Sub-National Level in Pakistan" project, which aims to empower vulnerable communities to anticipate, prepare for, and respond to disasters and reduce localized disaster impacts, the key objective is to strengthen sub-national and local organizations for disaster preparedness through partnerships and meaningful community engagement. In line with Output 4.2.1: Community-level disaster risk and capacity assessments conducted, Activity 4.2.1.1 focused on conducting participatory multi-hazard risk, vulnerability, and capacity assessments at the community level. The assessment exercise was undertaken to identify and analyze the major hazards affecting targeted communities, understand their underlying vulnerabilities and exposure, and document existing capacities, resources, coping mechanisms, and gaps in disaster preparedness. The participatory approach ensured that community members, including women, youth, vulnerable groups, and local stakeholders, contributed their knowledge and perspectives to the assessment process, thereby strengthening local ownership and ensuring that identified risks reflected community realities. The findings generated an evidence base for prioritizing disaster risks, identifying vulnerable groups and areas, and informing subsequent preparedness, early action, and disaster risk reduction planning. The exercise also strengthened collaboration between communities, local organizations, and relevant disaster management stakeholders, contributing to more inclusive, locally led, and context-specific disaster preparedness and resilience.

2. Introduction to the Multi-Hazard Risk & Vulnerability Assessment of Village Bishonai & Malakpur

2.1 Purpose:

To provides a practical roadmap for helping communities understand, anticipate, and address the impacts of climate change and recurring disasters. It identifies local risks, vulnerabilities, and priority adaptation needs while promoting inclusive, community led solutions. By guiding coordinated action, resource mobilization, and informed decision making, the plan aims to strengthen resilience, safeguard livelihoods, and support sustainable development for present and future generations.

2.2 Objectives:

The overall objective is to develop an evidence-based, participatory and locally relevant document for Village Bishonai & Malakpur based on an assessment of disaster risks, climate vulnerabilities and existing community capacities.

The specific objectives are:

- Assess and analyse the major hazards, exposure, vulnerabilities, risks and existing coping capacities of the community in relation to disasters and climate change.
- Identify and prioritize locally appropriate disaster risk reduction and climate adaptation measures based on community consultations, historical disaster impacts, climate-related challenges and sectoral vulnerabilities.
- Develop a practical and inclusive assessment report outlining priority actions, roles and responsibilities, timelines, resource needs and monitoring arrangements for future implementation by relevant stakeholders.
- Align the proposed priorities and actions with relevant national and provincial policies and frameworks on disaster risk reduction, climate change adaptation and sustainable development.

2.3 Methodology Adopted for the Development of the Report:

This report was developed through a participatory and evidence-based process. The methodology combined community consultation, disaster and climate risk assessment, identification of priority adaptation needs, and review of relevant policy and institutional frameworks.

The following key steps were undertaken:

1. Participatory Disaster and Climate Risk Assessment: A community-level Multi hazards Vulnerability Assessment was conducted to identify major hazards, exposed elements, vulnerabilities, existing capacities and priority risks. Participatory tools, including Focus Group Discussions (FGDs), Key Informant Interviews (KIIs), direct observations, hazard ranking and mapping exercises, were used to collect information from the community.

2. Community Consultation and Validation: Community members and relevant local stakeholders were consulted to understand historical disaster impacts, climate-related changes, existing coping practices, livelihood vulnerabilities and locally perceived adaptation needs. The findings were discussed and validated with the community to ensure that the Plan reflects local realities and priorities.

3. Identification of DRR and Climate Adaptation Measures: Based on the risk and vulnerability assessment, locally appropriate disaster risk reduction and climate adaptation measures were identified. These measures considered the severity of risks, community needs, existing capacities and feasibility of future implementation.

4. Policy and Institutional Alignment: The identified priorities were reviewed against relevant national and provincial policies and frameworks, including the NAP, NDCs, Khyber Pakhtunkhwa CCAP and relevant disaster management and sectoral plans.

5. Preparation of the Action Plan: The measures were translated into an action plan outlining proposed activities, responsible and supporting stakeholders, implementation timeframes, resource requirements and expected outcomes. Monitoring, review and updating arrangements were also incorporated to guide future implementation of the Plan.

3. General Profile of Village Bishonai

3.1 Geographic Setting

Village Bishonai

Village Bishonai is situated in Village Council Bishonai, Union Council Malakpur, Tehsil Gadezai, District Buner. The village is located along the Dokada–Malakpur Road, approximately 4.5 km from Pir Baba Bazaar. The total area of Village Bishonai is around 2.5 square kilometers. The village is surrounded by mountains and is a moderately sized rural settlement primarily dependent on natural resources for livelihoods. Due to its location on steep terrain and proximity to streams, Bishonai is vulnerable to natural hazards, including landslides, soil erosion, and flash floods.

Village Malakpur

Village Malakpur is situated in Village Council Narbatawal, Union Council Malakpur, Tehsil Gadezai, District Buner. The village is located along the Dokada–Malakpur Road, approximately 2–3 km from Pir Baba Bazaar. The total area of Malakpur is around 3 square kilometers and the village is surrounded by mountains. It is a rural settlement where the majority of households depend on agriculture and natural resources for their livelihoods. Due to its location near a stream and mountainous terrain, the village is highly vulnerable to flash floods, soil erosion, and related hazards.

3.2 Weather and Climate:

Village Bishonai and Malakpur are located in the mountainous terrain of District Buner, Khyber Pakhtunkhwa. The climate of the area is influenced by several factors, including altitude, topography and Monsoon. These climatic systems govern the seasonal variation in temperature and precipitation in the area. The maximum and minimum values of temperature and precipitation in each season are presented below.

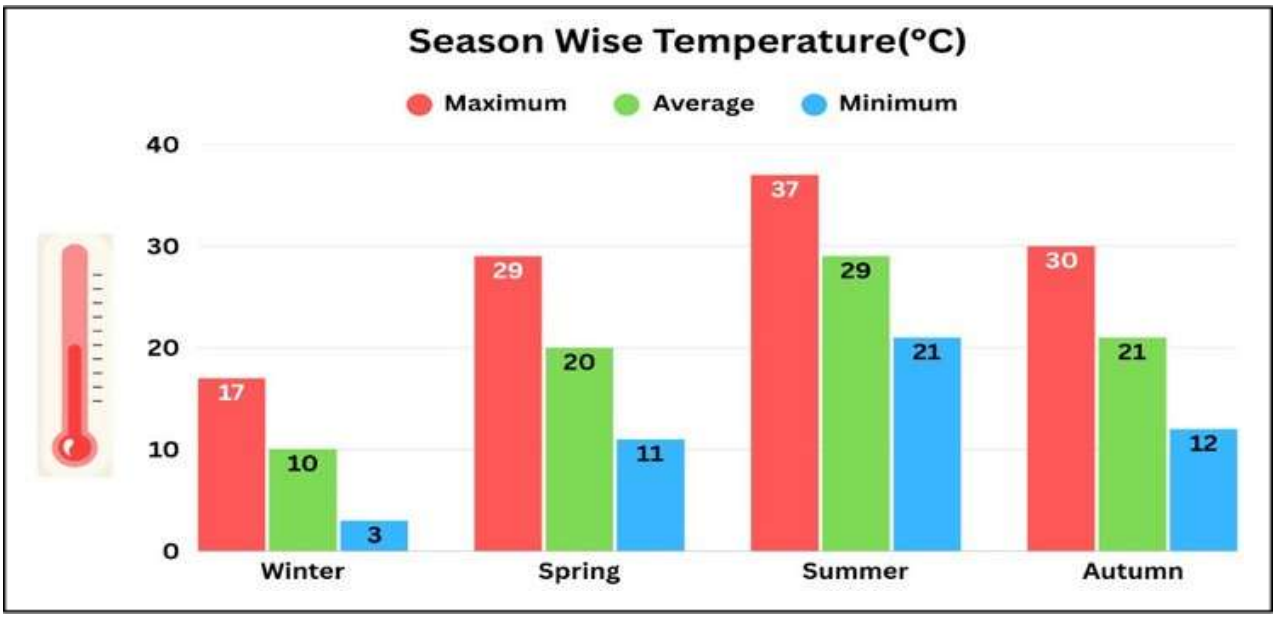


Figure 1: Season-wise temperature of village Bishonai & Malakpur (Source: WorldClim Version 2.1)

3.3 Demographic Profile:

Village Bishonai consists of approximately 160 households with a total population of around 2,100 individuals, including 1,000 males and 1,100 females. Similarly, Village Malakpur comprises approximately 350 households with a total population of about 2,450 individuals, including 1,200 males and 1,250 females.

Both villages are predominantly rural settlements where communities rely heavily on agriculture, livestock, forests, and other natural resources for their livelihoods and daily needs. The increasing population and expansion of households have resulted in growing pressure on available natural resources, particularly water sources, forest resources, and grazing lands. Increased demand for drinking water, irrigation, fuelwood, and livestock grazing areas has intensified the use of local resources, potentially contributing to issues such as water scarcity, forest degradation, and reduced availability of grazing areas.

3.4 Main Sources of Livelihoods:

3.4.1 Agriculture:

The community of both villages depends on agriculture for income. According to the local community, 70% of population are engaged in agriculture. Even those households that have other sources of income (livestock, wage labor, and seasonal employment) are still involved in farming.

Most of the agricultural land depends on rainfall. This heavy reliance on rain-fed farming makes agricultural production highly sensitive to changing rainfall patterns and drought conditions. Farmers commonly cultivate maize, wheat, and vegetables for household consumption.

3.4.2 Livestock:

Livestock ownership is an important livelihood asset, which consist of goats, sheep, cows, buffalos and poultry. Livestock provides milk, meat, manure, and supplementary income for families. However, disease outbreaks and fodder shortages during extreme weather events pose significant challenges. The absence of veterinary services in the village increases livestock mortality risks and economic losses during disease outbreaks.

3.5 Status of the Available Resources and Services:

3.5.1 Health Facilities:

There is no health facility available within both villages. Residents travel to Dhokada, Jukhela and Dagar for healthcare services. During heavy rains and road blockages, access to emergency healthcare becomes difficult, increasing health risks for pregnant women, children, elderly persons, and individuals with disabilities.

3.5.2 Education Facilities:

Both the villages has Government Primary School, providing basic educational opportunities within the community. However, 60% of males have completed Matric or higher education, while only 15% of females have achieved the same level. the likely reason is that, most girls do not have access to a high school outside the village.

3.5.3 Infrastructure and Housing:

The households in the village consist of kacha, semi-pacca, and pacca structures. A significant number of houses are constructed using locally available materials such as mud, stone, and concrete blocks, which provide limited resistance against extreme weather events. These structures are particularly vulnerable to heavy rainfall, earthquakes, flash floods, and other climate-related hazards due to weak construction materials and limited protective measures.

In addition to housing vulnerabilities, the condition of local infrastructure further increases community risks. Many internal roads are unpaved and become difficult to access during heavy rainfall, affecting mobility and emergency response. Damaged or poorly maintained irrigation channels reduce agricultural productivity and increase the risk of water-related damage to farmland. Furthermore, the absence of adequate protection structures, such as streambank protection walls, retaining walls, and check dams, exposes homes, agricultural land, and community infrastructure to erosion and flooding. Strengthening resilient housing practices and improving local infrastructure are essential to reduce disaster risks and enhance community resilience.

3.5.4 Water, Sanitation and Hygiene (WASH):

The villages depend on natural springs and well for drinking water, which is supplied directly or through plastic pipelines to households. After the devastating flood of 2025, the Bishonai village lacks a formal water supply scheme and treatment facility. During heavy rains, spring water sources may become contaminated by sediment and surface runoff, posing risks of waterborne diseases. In addition, in village Malakpur the lack of a proper sewerage system and reliance on open drains, leading to a higher incidence of waterborne diseases during floods.

4. Multi Hazard Risk & Vulnerability Assessment

Multi-Hazard Risk and Vulnerability Assessment (MHRVA) exercises were conducted in Village Bishonai and Village Malakpur through a participatory community-based approach involving local community members and key stakeholders. The assessment aimed to identify major hazards, vulnerable groups, livelihood resources, existing capacities, and suitable risk reduction measures. During the process, different participatory tools were applied, including hazard and resource mapping, historical timeline, seasonal calendar, vulnerability matrix, household decision-making assessment, institutional mapping through Venn diagrams, and mitigation and adaptation planning.

4.1 Hazard and resource Mapping:

Hazard and Resource Mapping was conducted in Village Bishonai and Village Malakpur through a participatory approach involving community members. The objective of this exercise was to develop a better understanding of the village environment, identify important livelihood resources, and assess the location and extent of different natural and climate-related hazards affecting the villages.

During the exercise, community participants prepared a detailed sketch map of their respective villages, identified key landmarks, settlement areas, important community facilities, and natural resources. The mapping process included the identification of houses, roads, agricultural areas, forests, grazing lands, water sources, streams, and other livelihood assets available within and around the villages. After developing the resource map, participants identified hazard-prone areas and marked locations exposed to different risks, including flash floods, landslides, soil erosion, and other climate-related hazards. The community also discussed the impacts of these hazards on houses, agricultural land, infrastructure, and vulnerable groups, including women, children, elderly people, and persons with disabilities.

In Village Bishonai, the mapping exercise highlighted the risks associated with steep mountainous terrain, stream, agricultural areas, and settlements located near hazard-prone zones. Similarly, in Village Malakpur, community members identified vulnerable locations related to stream flows, agricultural land, and areas exposed to flash floods and erosion. The exercise also helped communities identify available safe areas, existing coping resources, and potential locations requiring protective measures.

The findings from the hazard and resource mapping provided a community-based understanding of local risks, exposed assets, and available resources, which served as a foundation for further MHRVA analysis and the development of appropriate mitigation and adaptation measures for Bishonai and Malakpur.

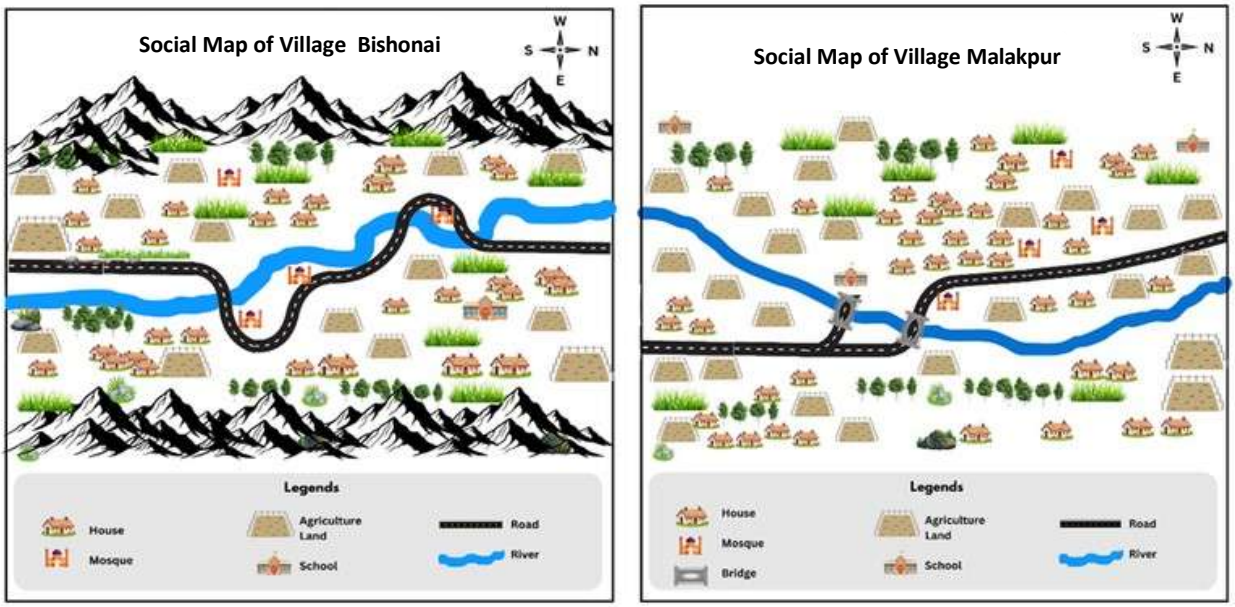


Figure 2: Social Maps of Village Bishonai and Malakpur

4.2 Historical Profile:

Historical Profile exercise was conducted in both villages to understand past hazard events, changes in hazard patterns, and their impacts on community livelihoods and infrastructure. The exercise was carried out through discussions with community members, particularly elderly residents and individuals with long-term experience of living in the villages, who provided valuable information about major disasters and environmental changes observed over the past several decades.

During the historical profile exercise, participants were encouraged to recall major events affecting their communities, including climate-related hazards such as flash floods, landslides, heavy rainfall events, and other environmental changes. Community members shared information regarding the timing and severity of past hazards, the damages caused to houses, agricultural land, infrastructure, and livelihoods, as well as the coping strategies adopted by households and the wider community to recover from these events.

In both villages, the historical discussion helped document community experiences related to hazards associated with mountainous terrain, streams, heavy rainfall, and land instability. Participants highlighted how past events affected them.

Table 1: Historical profile

Year	Disaster	Impact	Response / Coping Mechanism
1995	Flood	Agricultural land was affected, resulting in damage to farmland and loss of agricultural productivity	The affected communities relied on their own resources and local support for recovery
1992	Earthquake	Houses and infrastructure were affected, causing damage to community assets and physical structures	Affected households received support from neighbours and relied on community cooperation
2010	Flood	Houses and agricultural land were affected due to flooding, causing damage to residential areas and livelihoods	Community members adopted self-help measures to recover from the impacts
2011	Lightning strike	A lightning strike hit the upper part of the Bishonai village, resulting in the tragic loss of five lives, including three children and two women	Self help
2015	Earthquake	Houses and infrastructure were affected, causing similar damages to residential structures and local facilities	Community members responded through self-help efforts and received government support where available
2025	Flood	Heavy flooding affected houses, markets, roads, vehicles, infrastructure, and agricultural land, causing significant disruption to community life and livelihoods	Affected families evacuated from vulnerable areas and relied on self-help measures and local coping mechanisms

4.2.1 Seasonal Calendar:

Seasonal Calendar was developed in Village Bishonai and Village Malakpur with the participation of local community members. The purpose of this activity was to understand seasonal changes, major livelihood activities, availability of natural resources, and the periods when communities face increased risks and challenges. During the exercise, community members discussed the timing of important activities throughout the year, including agricultural activities, livestock practices, rainfall patterns, water availability, availability of pastures, and climate-related events such as floods and heavy rainfall.

In both villages, the seasonal calendar showed that most households depend on agriculture, livestock, and natural resources. Community members identified the rainy season as a sensitive period due to risks of flash floods, soil erosion, and damage to agricultural land. They also highlighted challenges related to water availability during dry periods.

The seasonal calendar exercise helped communities understand the connection between seasonal changes, livelihood activities, and disaster risks. The information collected was used to identify vulnerable periods and support the planning of suitable adaptation and risk reduction measures.

Table 2: Seasonal calendar

S#	Factors/Activities	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Weather Condition													
1	Winter												
2	Summer												
3	Spring												
4	Autumn												
5	Rain Fall												
Seasonal occurrence of climate-related hazards													
1	Flash flood												
2	Lightning Strike												
Seasonal challenges													
1	Seasonal diseases												
2	Livestock diseases												
3	Shortage of drinking water	When there is no rain for longer time (drought season).											
4	Shortage of pasture												
5	Seasonal migration	They don't migrate.											
Crops													
1	Maize												
2	Wheat												
3	Vegetables												
Livelihood													
1	Agriculture labouring (planting,												

	weeding, harvesting)												
Socio-cultural activities													
1	Marriages	According to Islamic Calendar and the financial condition of the families.											
2	Religious events	Only Eid ul Fitar & Eid ul Azha											

4.3 Vulnerability Assessment:

As part of the MHRVA exercise, a Vulnerability Matrix was developed in Village Bishonai & Malakpur to identify important community assets and assess their level of vulnerability to major hazards. The exercise was conducted through discussions with community members to understand how different hazards affect key livelihood and community assets, including houses, livestock, farmland, roads, schools, and other essential facilities. The assessment focused on two major hazards identified by the community: floods and earthquakes.

Table 3: Vulnerability Matrix of Village Bishonai & Malakpur



The vulnerability assessment identified floods as one of the major hazards affecting both villages, with high impacts on houses, livestock, farmland, roads, and schools. Community members highlighted that flood events can damage residential structures, affect agricultural land, disrupt transportation routes, and create challenges in accessing essential services.

The assessment also identified earthquakes as another important hazard, particularly affecting houses and infrastructure. Due to the presence of kacha and semi-pacca structures in the villages, residential buildings remain vulnerable to earthquake impacts. Community infrastructure, including schools and roads, may also face damage during earthquake events.

The matrix indicates that houses, agricultural land, and livestock are among the most important vulnerable assets because they directly influence community safety and livelihoods. Damage to farmland can affect food production and household income, while impacts on livestock can reduce an important source of livelihood support for rural families.

4.4 Household Decision Making:

Household Decision-Making Pile Sorting activity was conducted in Village Malakpur to understand the role of men, women, and joint decision-making in household matters. The exercise helped identify who generally participates in important household decisions related to education, household needs, livestock, marriages, and livelihood activities.

Table 4: Household Decision-Making Matrix – Village Bishonai & Malakpur

No.	Household Decisions / Activities	Men	Both	Women
1	Children's education decisions		✓	
2	Healthcare decisions for family members		✓	
3	Purchase of household items and daily needs			✓
4	Livestock selection, purchase, and management	✓		
5	Crop selection and farming decisions		✓	
6	Use and management of household income		✓	
7	House construction, repair, and selection of safer location	✓		
8	Marriage decisions of children		✓	
9	Migration and employment decisions	✓		
10	Identification of safe places during floods/earthquakes	✓		
11	Household evacuation decisions during flood, earthquake, or other hazards	✓		
12	Protection and relocation of livestock during disasters		✓	
13	Storage of food, drinking water, medicines, and emergency supplies before hazards			✓
14	Protection of important documents and household assets during disasters	✓		
15	Seeking emergency assistance from government/NGOs after disasters	✓		
16	Repair and reconstruction of houses after disaster events	✓		
17	Adoption of climate-resilient farming practices after hazards	✓		
18	Participation in community disaster preparedness meetings and drills		✓	
19	Early warning information sharing within the household		✓	
20	Support decisions for elderly persons, children, and persons with disabilities during emergencies		✓	

4.5 Venn Diagram (Social and Institutional Network Assessment) :

The **Venn Diagram (Social and Institutional Network Assessment)** was conducted in **Village Bishonai and Malakpur** to identify key institutions, organizations, and stakeholders that contribute to disaster risk reduction, emergency response, and recovery. The exercise aimed to understand existing coordination mechanisms, available support systems, and the level of engagement of different actors during different phases of disaster management.

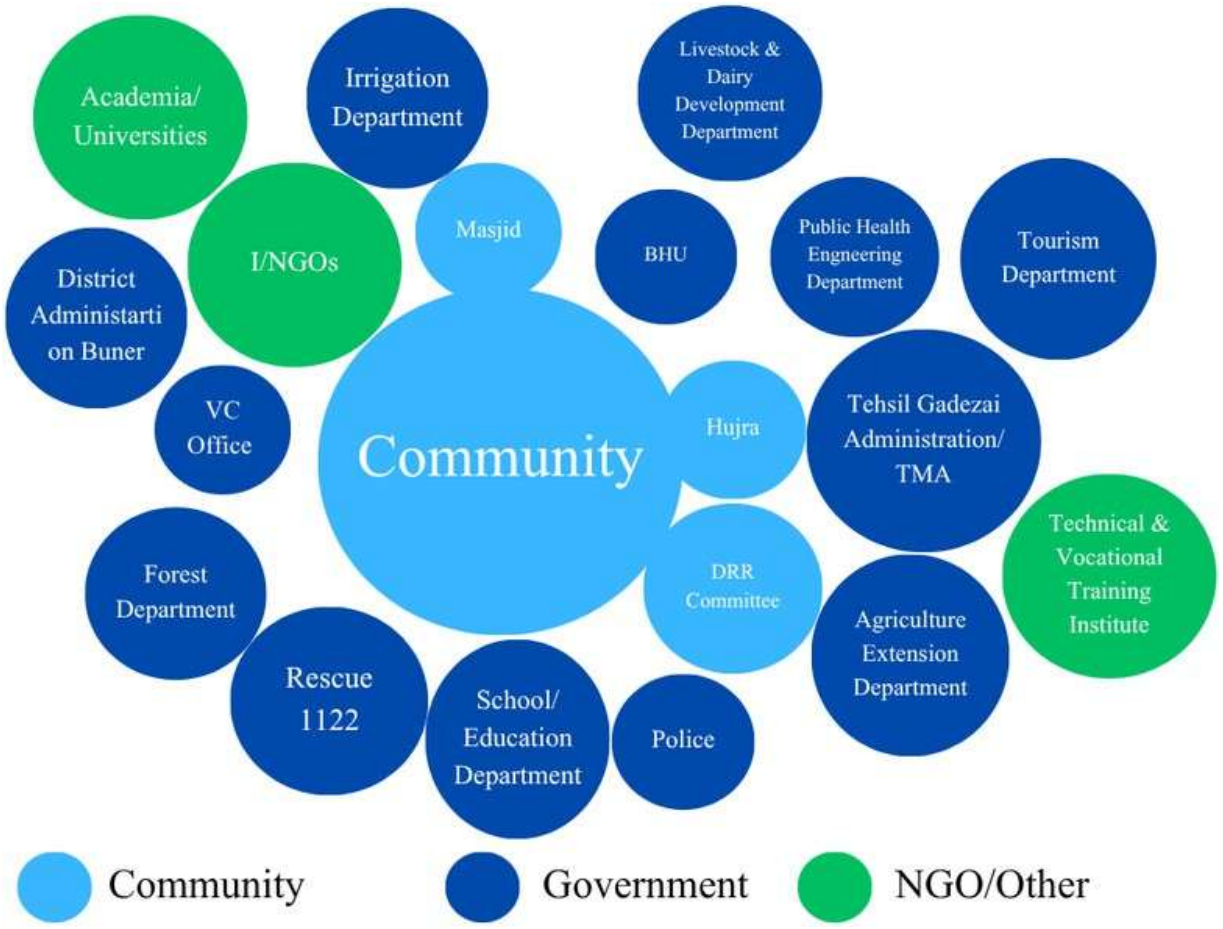


Figure 3: Venn diagram showing the stakeholder relationship with the community

Following the mapping of institutions, community members discussed the roles and responsibilities of identified stakeholders during the 2025 flood emergency, including their involvement before, during, and after disaster events. The exercise highlighted the importance of coordination between community-based structures, government departments, emergency services, and humanitarian organizations in reducing disaster impacts and supporting affected households.

Table 5: Social and Institutional Network Matrix

Social and Institutional Network Matrix

Organization / Institution	Before Disaster	During Disaster	After Disaster	Contact Person	Contact
Rescue 1122	Nil	Rescue, evacuation, first aid and emergency response	Nil	DEO	1122
Local Administration	Nil	Emergency coordination, relief management and resource mobilization	Damage assessment, rehabilitation and recovery support	Amin Rashid	0341-6716307
NGOs	Nil	Relief distribution and support to vulnerable groups	Rehabilitation and livelihood recovery support	Hakim Zada	0333-9697172
Government Departments	Nil	Sector-based emergency response and service restoration	Recovery, rehabilitation and infrastructure support	DC Office	0334-5694829
Local Committees	Nil	Local coordination, evacuation support and information	Community recovery monitoring and coordination	Rizwan	0331-5226677
Army	Nil	Rescue, relief and support in difficult areas	Nil	—	—
VC Office	Local coordination and communication	Emergency information sharing	Recovery coordination	—	—
Agriculture Extension Department	Farmer awareness	Agricultural damage assessment and guidance	Crop recovery and agricultural rehabilitation	—	—
Livestock & Dairy Development Department	Nil	Veterinary and livestock emergency support	Livestock recovery support	—	—
Public Health Engineering Department	Nil	Emergency water supply support	Repair of damaged water schemes	—	—
Police Department	Safety planning and	Law and order and evacuation support	Security during recovery	—	—

Community participants identified several important institutions involved in flood preparedness and response, including Rescue 1122, Local Administration, NGOs, Government Departments, Local Committees, Army, VC Office, Agriculture Extension Department, Livestock & Dairy Development Department, Public Health Engineering Department, and Police Department. These institutions provided different forms of support, including emergency rescue, relief assistance, infrastructure restoration, agricultural recovery, water supply rehabilitation, and community coordination.

The assessment showed that Rescue 1122 played an important role during emergency situations, particularly in rescue operations, evacuation, first aid, and immediate response activities. The Local Administration served as a key coordination body during and after disasters by managing emergency response, mobilizing resources, conducting damage assessments, and supporting recovery processes. NGOs and government departments contributed mainly through relief support, technical assistance, rehabilitation, and restoration of essential services.

Community-level institutions, including Local Committees, VC Office, and other social structures, were recognized as important mechanisms for communication, information sharing, community mobilization, and support to vulnerable households. Technical departments such as Agriculture Extension, Livestock, and Public Health Engineering supported recovery by addressing agricultural losses, livestock-related impacts, and damaged water supply systems.

5. Flood Risk Analysis

Flash floods are among the major hazards affecting Bishonai and Malakpur villages, caused by Cloudbursts, intense rainfall, rapid runoff, and limited drainage capacity. Floods pose significant risks to agriculture, WASH services, electricity, roads, irrigation systems, and climate-sensitive livelihoods.

Agriculture is highly vulnerable, particularly wheat and maize crops, as floodwaters cause erosion, and crop damage. A major impact observed in both villages is the deposition of mud, sand, gravel, and large stones on farmland after floods, which burried fertile fields, reduced soil productivity, damage crops, block irrigation channels, and increase the labour and cost required for land restoration. This often delays sowing and reduces crop yields.

Flood events also affect vulnerable groups, including persons with disabilities, children, elderly people, and widows, due to limited mobility and reduced coping capacity. Damage to roads, water sources, electricity systems, and other critical infrastructure disrupts essential services and community recovery.

The impacts of past flood events, including those experienced in 2025, highlight the need for improved early warning systems, drainage management, climate-resilient infrastructure, ecosystem-based measures, and community preparedness to reduce future flood risks.

5.1. Adaptation Pathways:

The following table summarizes the major negative impacts of the flood, their effects on the community, and the coping mechanisms currently practiced by local residents. These existing practices provide a foundation for identifying adaptation pathways and developing targeted interventions to enhance long-term disaster resilience and climate adaptation.

Table 6: Adaptation Pathways

Hazard	Negative Impact of Hazard	Effect on Community	Coping Mechanism
Flood	**Damage to Houses and Residential Property**	The flood caused widespread damage and destruction to houses, leaving many families without adequate shelter. The loss of homes resulted in displacement, temporary relocation, increased financial hardship, and prolonged recovery challenges.	Community members reconstructed damaged houses using locally available materials, with many relocating or rebuilding at comparatively safer locations away from the river. Affected households also received relief assistance and recovery support through coordinated efforts of government agencies, NGOs, and local communities.
	Damages to Infrastructure & Loss of Life.	The flood severely damaged roads, streets, bridges, irrigation channels, and water supply and sanitation (WASH) infrastructure, disrupting transportation, access to essential services, and community connectivity. The disaster resulted in the tragic loss of more than **86 lives** and left countless others injured.	The community, government departments, and humanitarian organizations have jointly undertaken the rehabilitation of damaged infrastructure. During the monsoon season, residents remain vigilant by monitoring weather conditions, sharing early warnings among themselves, avoiding unnecessary movement near the river, and evacuating to safer locations when heavy rainfall is anticipated.

Hazard	Negative Impact of Hazard	Effect on Community	Coping Mechanism
Flood	**Loss of Agriculture & Livestock**	The flood destroyed irrigation systems, swept away standing crops, and resulted in the loss of more than **70 livestock animals**, leading to reduced agricultural productivity, loss of livelihoods, food insecurity, and declining household income.	Farmers have gradually restored irrigation channels and shifted livestock shelters to safer locations away from flood-prone areas. During the rainy season, livestock are moved to higher ground, while many households have diversified their livelihoods by seeking employment in urban areas and overseas to reduce dependence on agriculture.
	Outbreak of Waterborne Diseases	Floodwaters contaminated drinking water sources and created unhygienic conditions, leading to increased cases of stomach illnesses, skin & eyes infections, and fever-related diseases.	Households avoid using contaminated water sources whenever possible and rely on treated or alternative safe drinking water. Support from government departments and NGOs has helped restore access to clean water, while community members have adopted improved hygiene practices to reduce the risk of disease outbreaks.
	Psychological Distress & Post-Disaster Traumas	The disaster left lasting psychological impacts on the community. During the monsoon season, many residents continue to experience fear and anxiety, with compelling some families temporarily relocating to other places or the homes of relatives until the flood risk subsides.	Families provide mutual support during emergencies, strengthen community solidarity, and seek emotional comfort through religious faith and collective prayers. During periods of heavy rainfall, vulnerable households voluntarily relocate to safer areas until conditions improve.

6. Community's Coping Capacities and Institutional Network

DRR committee is formed, which serves as the key platform for climate resilience and disaster preparedness in Bishonai and Malakpur through strong coordination among communities, government departments, and local institutions. The committees are notified from DDMA Buner.

6.1. Structure of DRR Committees:

VILLAGE BISHONAI

S.N	Name	Father Name	CNIC No.	Contact #
1	Muhammad Islam	Abdur Rahim	15101-9574444-3	0345-3442093
2	Zahoor Ullah	Bakht Taj	15101-9407033-3	0316-1901986
3	Naseeb Zada	Fazal Subhan	15101-9725180-3	0319-9439626
4	Muhammad Saghir	Ridullah	15101-5745920-1	0346-8383240
5	Jalal Ahmad	Siraj	15101-0277313-7	0348-1304541
6	Dilawar Khan	Jan Muhammad	15101-2781866-1	0344-9210440
7	Abdul Samad	Noor Raheem	15101-7488702-9	0344-1974520
8	Ghulam Habib	Zareen	15101-4500723-7	0340-8780031
9	Sawal Faqir	Sultan Zeb	15101-7004778-5	0342-6075693
10	Ajmal Zeb	Muhamber	15101-7140943-5	0347-2270140
11	Jehan Zeb	M. Khan Faroosh	15101-7970108-5	0346-9058955
12	Hazrat Ullah	Habibul Wahab	15101-3873233-6	0344-9159865
13	Zahid Hussain	Khandan Khan	15101-0460601-3	0316-5544555
14	Aurang Zib	Bashi Khan	15101-5259604-1	0345-9159300
15	Ajmal Khan	Khair Rahman	15101-9017852-3	0317-1955763
16	Qaisar Ali	Dawood Shah	15101-6242484-9	0341-9766522
17	Amir Zeb	Abdul Jalil	15101-6129477-1	0344-2881917
18	Fiaz Ullah	Said Wahab	15101-3107329-7	0313-9732099
19	Dilbar Khan	Ghulam Khazar	15101-0256054-1	0344-9319532
20	Ajmal Zada	Sahib Zar	15101-0689032-3	0342-1439548

VILLAGE MALAKPUR

S.N	Name	Father's Name	CNIC	Contact Number
1	Sardar Akbar Hussain	Mahmood	15101-0327316-5	0347-0969697
2	Naib Sardar Rahim Dad	Sher Bahadur	15101-8648943-9	0348-9077944
3	Ubaid Ullah	Hussain Dad	15101-7444650-3	0313-9487710
4	Imad Ullah	Muhammad Zada	15101-1402932-7	0348-9690318
5	Saleem Zada	Sher Bahadur	15101-290000-7	0370-9576876
6	Jamal Khan	Muzaffar Khan	15101-4164316-7	0342-9395568
7	Zeeshan Khan	Bakht Sher	15101-8693526-9	0318-9526429
8	Sadiq Khan	Siraj Ud Din	15101-7342056-1	0348-3755632
9	Fazal Wahab	Muhammad	15101-1476342-5	0344-9200077
10	Muneer Ahmad	Syed Quresh	15101-4585584-7	0311-0950800
11	Zubair Ahmad	Syed Johar	15101-394673-9	0347-6289149
12	Muneeb Ur Rehman	Umar Khan	15101-5756795-7	0315-7640086
13	Sarfaraz Khan	Muhammad Ayaz	15101-6847667-7	0345-9698699
14	Atta Ul Rehman	Muhammad Ayaz	15101-0329993-3	0346-9419966
15	Naveed Ur Rehman	Muhammad Ayaz	15101-0328101-5	0346-9418811
16	Amin Ur Rehman	Muhammad Ayaz	15101-6953212-7	0345-8522666
17	Kifayat Ullah	Bakht Zada	15101-7234611-1	0344-1124506
18	Ehtisham Khan	Sher Ali Khan	15101-9754696-1	0341-3262160
19	Luqman Muneer	Muneer Rahim	15101-2610466-7	0343-9063784

7. Action Plan:

Village Bishonai						
No	**Type of Measure**	**Comment / Explanation**	**Relevant Locations**	**Implementing Agencies**	**Priority**	**Timeframe**
1	**Construction of flood protection wall**	Construct 300 meters of flood protection walls at vulnerable sites to reduce damage to settlements, farmland and infrastructure.	Vulnerable flood sites in village Bishonai	C&W Department, Irrigation Department, NGOs	High	Medium Term
2	**Climate Resilient Culverts and Footbridges**	Upgrade 2 critical crossings to maintain safe access during flood events.	Stream crossing points in village	C&W Department, Irrigation Department, DRR Committee, NGOs	High	Medium Term
4	**Install 03 emergency water storage tanks (one each at the foot slope of the surrounding hills).**	Install emergency water storage tanks to reduce water shortages during emergencies.	Foot slope of hills	PHED, NGOs	Medium	Medium Term
5	**Irrigation Channel Rehabilitation**	Line and rehabilitate irrigation channels to reduce seepage and improve agricultural water availability.	Main channel of the village	Water management NGOs	Medium	Medium Term
10	**Community Early Warning System**	Establish village-level early warning system	-	DDMU Buner, NGOs	High	Short Term
11	**Community Based Disaster Risk Management Training**	Conduct male and female trainings to improve disaster preparedness.	Village communities	DDMU, Rescue 1122, NGOs	High	Short Term and Annual
12	**School Flood Preparedness Drills**	Conduct annual flood preparedness drills in schools.	Schools	Education Department, Schools, DDMU, NGOs	Medium	Annual

13	**Climate Smart Agriculture Training**	Train farmers on climate-smart agriculture practices.	Farming communities	Agriculture Extension Department, NGOs	High	Short-Medium Term
14	**Weather Advisory Services and Crop Calendars**	Provide climate information to support better farming decisions.	Agricultural communities	Agriculture Extension Department, DRR Committee	Medium	Short Term
15	**Community Health and Hygiene Training**	Train volunteers on hygiene promotion and disease prevention.	Village communities	Health Department, PHED, NGOs	High	Short-Medium Term
16	**Vulnerable Groups Registry Development**	Develop registry of elderly persons and persons with disabilities for disaster planning.	Village households	Social Welfare Department, DDMU, NGOs	High	Short Term
17	**Women Livelihood Support and Participation**	Promote women's participation in income-generating activities.	Women groups	Social Welfare Department, NGOs	Medium	Medium-Long Term

Village Malakpur

No	Type of Measure	Comment / Explanation	Relevant Locations	Implementing Agencies	Priority	Timeframe
1	**Protection Wall Construction**	Construction of protection wall to reduce flood impacts and safeguard settlements, agricultural land and infrastructure.	Rajabad	Local Government, C&W Department, Irrigation Department, NGOs	High	Medium Term

No	Type of Measure	Comment / Explanation	Relevant Locations	Implementing Agencies	Priority	Timeframe
2	**Removal of Mud and Stones from Fields**	Removal of deposited mud and stones from agricultural fields brought by flood to restore farmland productivity and support recovery of livelihoods.	Flood-affected agricultural fields	Agriculture Department, Local Government, NGOs,	High	Short Term
3	**School Infrastructure Improvement**	Improvement of school infrastructure to provide safe and disaster-resilient learning spaces.	Village primary school	Education Department, Local Government, NGOs	Medium	Medium Term
4	**Irrigation Channel Rehabilitation**	Line and rehabilitate irrigation channels to reduce seepage and improve agricultural water availability.	Main channel of the village	Water management NGOs	Medium	Medium Term
5	**Construction of Check dams**	Construct check dams to slow the speed of stream during flood	Feasible location on stream	Irrigation department	High	Medium–Long Term
6	**Street Pavement and Village Access Improvement**	Construction and improvement of village streets to improve mobility, drainage and emergency access.	Entire village	Local Government, TMA, NGOs	Medium	Medium Term
7	**Skill Training Programs**	Provide technical and livelihood skills training to improve employment opportunities and resilience.	Community members, youth and vulnerable groups	TEVTA, NGOs, Relevant Departments	High	Short–Medium Term

No	Type of Measure	Comment / Explanation	Relevant Locations	Implementing Agencies	Priority	Timeframe
8	**Climate Change Awareness**	Conduct awareness sessions on climate risks, adaptation practices and disaster preparedness.	Village communities	NGOs, DRR Committees, Government Departments	High	Short Term
9	**Plantation Activities**	Promote plantation for environmental protection, erosion control and ecosystem improvement.	Community land and degraded areas	Forest Department, NGOs, Community Groups	Medium	Medium–Long Term
10	**Capacity Building**	Strengthen capacity of community members and institutions on preparedness, adaptation and response measures.	Village/community level	NGOs, Government Departments, DRR Committees	High	Short–Medium Term

Annexures

List of Emergency Numbers:

Department	Phone Number	Department	Phone Number
Provincial Disaster Management Authority (PDMA)	1700	**Veterinary Services**	+92-91-9210276
Disaster Management Unit (DDMU) Buner	0939-510450	**Public Health Engineering Department (PHED)**	0939-510017
District Disaster Management Officer (DDMO)	0939-510450	**Civil Defense**	0300 0111987
Tehsil Municipal Authority (TMA)	0939-540243, 0939-540244	**Rescue Services**	1122
Police	0939-510470	**Health Services**	091-9210269

Glimpses of the Disaster and Climate Risk Assessment Consultation Process:

Village Bishonai













Village Malakpur








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