



بلال احمر پاکستان



Baseline Report

VULNERABILITY TO RESILIENCE (V2R)

Implemented by Pakistan Red Crescent Society

Funded by National Disaster Risk Management Fund & Asian Development Bank

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ACRONYMS

NDRMF	National Disaster Risk Management Fund
PRCS	Pakistan Red Crescent Society
NDMA	National Disaster Management Authority
DDMA	District Disaster Management Authority
GOP	Government of Pakistan
ADB	Asian Development Bank
BLS	Baseline Survey
NDMP	National Disaster Management Plan
NFPP	National Flood Protection Plan
EAD	Economic Affairs Division
FIPs	Flood Implementation Partners
PC 1	Planning Commission Proforma 1
PDMA	Provincial Disaster Management Authority
MHVRA	Multi-Hazard Vulnerability Risk Assessment
SFDRR	Sendai Framework for Disaster Risk Reduction
SDGs	Sustainable Development Goals
ESMS	Environment and Social Management System
PKR	Pakistani Rupees
EA	Executive Agencies
GAD	Gender Action Plan
CSOs	Civil Society Organizations
NGOs	Non-Governmental Organization
PWDs	Person with Disability
TORs	Terms of Reference
CV	Curriculum Vitae
GPS	Global Positioning System
IEE	Initial Environmental Examination

EIA	Environmental Impact Assessment
REA	Rapid Environmental Assessment
IP	Indigenous People
MOU	Memorandum of Understanding
TMA	Tehsil Municipal Authority
UC	Union Council
DMPs	Disaster Management Plans
EWS	Early Warning System
GLOFs	Glacial Lake Outburst Floods
NIDM	National Institute for Disaster Management
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
CCA	Climate Change Adaptation
CBDRM	Community Based Disaster Risk Management
ROW	Right of Work
VDRMCs	Village Disaster Risk Management Committees
UDRMCs	Union Council Disaster Risk Management Committees

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Executive Summary

The Vulnerability to Resilience Project is a project implemented jointly by PRCS and NDRMF with financial funding from the Asian Development Bank. The overall objective of the project is to increase capacity of communities to reduce disaster risk, through better planning, preparedness, response and, resource allocation at the governmental and community levels in four districts of Azad Jammu & Kashmir. Through this baseline study, PRCS wanted to acquire a comprehensive picture of the project areas with regards to DRR knowledge, behaviors and practices, health, water & sanitation, livelihood, climate risk assessment and beneficiary communication which would allow for the effective measuring of the intervention's impact at the end of the project.

A quantitative approach of the survey is used for the study. A total of 320 households from 160 target villages (2 from each village) was selected for the household survey and a pre-structured questionnaire was developed. This report presents the findings from the baseline study gathered from 355 respondents in four districts.

The findings of the study are presented sequentially in the report: following the methodology, the first section gives us the information of the respondents; the second section explores and analyzes existing knowledge levels on DRR; the third section examines the information pertaining to the house of the respondent; the fourth section examines the status of the health of respondents and their families; the fifth section focuses on water and sanitation; the sixth section explain the climate risk factors in targeted districts; the seventh section examines the livelihood of the respondents and the final section deals with beneficiary communication and engagement.

In each section of the report, a graphical analysis of findings from the household survey is presented. One of the main findings of the baseline study is that even though very little institutional knowledge on DRR had reached the targeted communities, people in the area had gained empirical knowledge through their experience over time facing disasters of various types.

Knowledge levels and understanding of risk, hazards and vulnerability were found to be high amongst respondents. Communities had developed mechanisms to cope with and mitigate the losses due to recent hazards and disasters. These included building resilient houses and saving resources.

Almost 50% of the respondents of the study were taking essential pre-disaster measures such as building strong house structures and saving money as well as knew how to apply strong adaptation measures post disaster. In case of the rest of the respondents, they required extensive trainings on CBDRM measures. A little less than 50% of the population still lived in Kacha Houses (Made from Mud or Wood) making them vulnerable to any future hazards or disasters.

Awareness on the necessity to take adaptation measures during disasters was also widespread amongst the respondents. Descriptions of what should be done, and by whom, during and after disasters in key areas such as shelter management, rescue, relief and rehabilitation were relatively detailed and realistic.

Most of the respondents of the study had received no formal training on climate change. Most respondents weren't able to accurately highlight some of the effects of climate change on their environment and they could not identify the impact of such changes on their lives and livelihoods. Was prevalence of diseases as compared to five to ten years ago have increased during the summers, winters and rainy season. Although the quality of water was considered by respondents as clean as it was years ago, the quality of air was described mostly as partially polluted. This partial pollution was also mostly attributed to recent urbanization and deforestation.

In spite of this strong knowledge base, it also appeared clearly from the baseline study that knowledge gaps remained extremely high, in particular in the area of early warning and climate change. Because the principal sources of knowledge were empirical or linked to the media, knowledge levels were found to be partial and incomplete and no respondent was able, for example, to define climate change or describe effects of climate change.

The absence of institutionalized knowledge also meant that knowledge-sharing remained an individual initiative with no structured mechanism for dissemination of DRR messages, and no related quality control. Perceptions on vulnerability also appeared restrictive and took little account for people with disability. Finally, whereas some of the respondents were taking a significant range of preparedness measures, others were taking few or none at all, leaving them completely exposed to disasters. Strong requests were made throughout the data collection process and by most respondents surveyed for more training on DRR and the establishment of stronger information-sharing mechanisms.

2. INTRODUCTION

2.1 Background

Pakistan is vulnerable to a multitude of natural hazards, such as floods, droughts, earthquakes, landslides and cyclones, resulting from its diverse geological and topological conditions. Experiences of severe flooding have increased in frequency in the past decade. The Pakistan State of Jammu and Kashmir is also at a high risk of flash flooding, landslides, avalanches and Glacial Lake Outburst Floods (GLOF). Furthermore, being situated in one of the world's most seismically active zones, AJ&K experiences major earthquakes, as in 2005, 2013 and most recently in 2015, resulting in a huge loss of life and assets. The country is also experiencing increased levels of internal conflict in recent years and has been hugely impacted by the on-going struggle against terrorism in the region. These armed conflicts, resulting in large numbers of displaced persons have further increased vulnerabilities of the local population. Pakistan is also ranked among the top ten most vulnerable countries in the world to climate change. Unless measures are taken, volatile climate change, decreased water availability and environmental degradation may decrease crop yields and eventually reduce food production creating an increase in food insecurity, morbidity and mortality due to diseases.

Climate change and environmental degradation are increasing the frequency of extreme weather events with increased risk of floods, droughts, cyclones, and glacier melts in the Himalayas- that will consequently affect fresh water resources. Additionally, river flows will decrease as glaciers recede, as well as cause regular damage to crops from pests, excessive rain, heat and cold, and a shortage of water for irrigation. Biodiversity loss will continue due to decrease in the availability of fresh water and a rise in sea level will further increase the intrusion of saline water and risks to mangroves. In the coming decades, the frequency, intensity and unpredictability of natural hazards and extreme weather events will increase due to climate change.

The topography of targeted districts of Azad Jammu & Kashmir is mainly hilly and mountainous characterized by deep ravines, rugged, and undulating terrain. These districts (Neelum, Jhelum Valley, Bagh and Sudhnoti) situated at northern areas are generally mountainous while other districts (Kotli, Mirpur and Bhimber) are generally plain.

The mountain ecosystems are relatively unstable and have low inherent productivity. Within this fragile environment, however, there is a great variety of ecological niches upon which people base their livelihood. Small land holdings and scarcity of cultivable land are the main factors limiting on-farm income. The population has grown at 2.4% annually during the last decade; however, the family size remains slightly over 5-7 members per family, living mostly in extended/joint family structures. The population is predominantly rural with only 12% people residing in cities but it varies district to district. The Rural to Urban ratio is 88:12. The population density is 336 persons per Sq Km. The literacy rate in recent years has increased from 55% to 76% according to estimates based on the 1998 census.

In all the targeted Districts and Union Councils, there is a mixed type of building construction including Pacca (use of bricks & concrete), Semi Pacca (mixed usage of bricks, concrete and mud) and Kacha (mud structures). The urban Union Councils have Pacca houses while the rural parts of the union councils have Semi Pacca or Kacha type of Structure.

All the Union Councils are connected with paved roads, however, some union councils are connected with unpaved roads or fair weather roads. During the winter season, some areas of AJ&K become disconnected as most of the roads become inaccessible such as roads to Union Council Gurase of District Neelum near the Indian border. Although, there are bridges on the main streams but in most of the Union Councils there are no proper bridges on mid-sized streams which eventually cause loss of lives, destruction of crops and livestock during the monsoon season.

In regards to education facilities in Kashmir; the state has primary, middle and high schools available in all of its union councils. However, Colleges and universities are not present in most of the Union Councils.

The communities of the selected union councils use mostly spring water. However, there are some water supply schemes that do exist in the area. Most of the UCs have water scarcity especially in Sudhnoti, Bagh, Jhelum Valley and Neelum. Almost 80% of the people have sanitation facilities.

Pakistan Red Crescent the leading humanitarian organization of Pakistan is recognized by the Government of Pakistan in “Pakistan Red Crescent Society (PRCS) Act No XV of 1920” (as amended in February 1974). Pakistan Red Crescent was recognized by the International Committee of the Red Cross (ICRC) on 21 July 1948 and is part of the International Red Cross and Red Crescent Movement (Movement). It is a member of the International Federation of Red Cross and Red Crescent Societies (IFRC) since 18 August 1948.

PRCS has been engaged in relief and resilience operations since its foundation and these include distribution of relief items to refugees in 1947-48, exchange of 10 million family messages during and after the Indo-Pak wars of 1965 and 1971, rehabilitation of flood victims in 1974, health relief for Afghan refugees in 1981 and relief worth Rs. 6.7 billion were provided to over 3.4 million affectees of major earthquake in 2005. Between 2005 to 2017, PRCS responded to 28 major disasters in the country and provided relief to 11 million beneficiaries, worth Rs. 24.5 billion.

PRCS has moved in to non-conventional, locally evolved, integrated and self-sustained risk reduction initiatives at community level for the last two decades and has successfully completed a number of projects. Few of these are; Integrated Recovery Programs, Community Based Risk Reduction Programs (CBDRR) in AJK and KP, Integrated Community Based Risk Reduction (ICBRR) in 5 provinces, School Safety Project in 16 districts and Climate Change Adaptation (CCA) project in 5 provinces of Pakistan. These initiatives strengthening readiness of the communities through CBDRM, SBDRM, Health Focused DRM activities. PRCS has implemented more than 30 CBDRM, ICBDRR projects in various hazard prone districts of Pakistan. The CBDRM is one of the core specialty of global RC/RC movement. Currently PRCS and IFRC are implementing a CBDRM project in 20 districts of Pakistan. The support from NDRMF will contribute in implementing structural mitigation measures into communities where CBDRM project is being implemented. Similarly, PRCS CBDRM also includes the health focused DRM activities. The proposed project and NDRMF contribution will play a vital role in building local resilience. While in working, the social mobilization, inclusion and gender and diversity are key cross cutting approaches and well considered in programming. The proposed initiative is unique in nature as it engages the stakeholders in a transformational and effective manner. The action aims at providing ultimate solutions to multiple hazards in 6 districts from Khyber Pakhtunkhwa/KP (newly merged districts from FATA and South Punjab that are most vulnerable to emerging climate induced disasters. An integrated Risk Reduction and response mechanism in this action will foster enabling environment at community level with inclusion of

traditionally ignored groups such as; indigenous population, people with disabilities, religious minorities, women especially women with special needs (pregnant etc.), elderly, and transgender. Moreover, it strengthens the community forums/committees to further establish intra and inter objective networks. Multi sectoral risk reduction, preparedness and response mechanisms are established and frameworks are in place. Most of all participatory and evidence-based social solutions are advocated and featured in government's actions.

2.2 Project Description

The Project's focus is to help strengthen the disaster risk resilience of communities and institutions in four districts of Azad Jammu Kashmir by reducing their vulnerabilities to impending natural hazards. Apart from structural & non-structural mitigation measures which is the primary hard component of the project, the project also focuses on soft interventions namely, Community Based Disaster Risk Management (CBDRM) and Community Emergency Response Trainings (CERT).

The project's intervention has been classified in to primarily two components i.e. hard and soft components. Hard components are focused on structural and non-structural measures that are directed towards three priority mitigation schemes that are flood protection walls, land stabilization and water conservation. The soft components are focused on building the capacities of community members and volunteers in targeted districts to be able to better cope with impending hazards or disasters.

Furthermore, the priority areas of intervention under this proposed project are taken from NDMP priorities and are as follow:

- Strengthening readiness of the communities through CBDRM.
- Develop volunteer force (NDMF) for effective response. PRCS has largest volunteer base in Pakistan which is approx. 1.8 million registered volunteers
- Structural measures in flood prone areas (river works: embankment strengthening and protection walls), Land stabilization and drought mitigation measures.

According to the results framework of the project, the following outcomes and outputs are described below:

Outcome 1: Number of people vulnerable to the negative impacts of multiple natural hazards as of 2018 are better protected and became resilient.

Outcome 2: Hectare of land protected against negative impacts of multiple natural disasters.

Output 1: Enhanced and strengthened organizational capacity at community's levels for DRR.

Output 2: A volunteer base is mobilized, organized and trained in emergency response by fulfilling Pakistan National Disaster Management Plan (NDMP) commitments.

Output 3: Comprehensive inclusive CBDRM is implemented to test new innovations and structural and non-structural approaches to DRR and DRM to inform better future development of national disaster risk management fund resilience plans and priorities.

Output 4: Increased institutional capacity in PRCS to address issues of gender & social differentiation in NDRMF supported project by ensuring inclusion (gender, environment, social safeguarding and human rights issues) throughout project cycle to protect dignity and rights of people through inclusive approaches.

Table 1: Project Result Framework

Result Chain	Performance Indicators	Baseline 2019	Target (2019-20)	Mean of verification	Risk
Outcome: Increased capacity of communities to reduce disaster risk, through better planning, preparedness, response and, resource allocation at the governmental and community levels.					
Increased institutional and physical capacity to reduce the socioeconomic and fiscal impacts of natural hazards and climate change in Pakistan	O1: Number of people vulnerable to the negative impacts of multiple natural hazards are better protected and became resilient (S O1)	0	281,878 from 16 UCs of 4 Districts. (160,000 direct beneficiaries and 121,878 are indirect)	Final evaluation/Project completion report	Major natural disaster in the area
	O2: Hectare of land protected against negative impacts of multiple natural disasters (S O2)	0	6821.82		Delay in formation/notification of steering committee
Output 1: Enhanced and strengthened organizational capacity at communities levels for DRR					
1.1 Enhanced awareness and preparedness on disaster risk reduction at the local level	1.1a Number of established and/or functional disaster risk management organizations at community level (S 2.1d)	0	160 VDRMCs 16 UCDRMCs	List of DMCs/Database	
	1.1b Number of CBDRM plans developed (S 2.1a)	0	160 VDMPs 16 UCDCMPs	DM Plans	

Result Chain	Performance Indicators	Baseline 2019	Target (2019-20)	Mean of verification	Risk
	1.1c Number of CBDRM plans implemented (S 2.1b)	0	160 VDMPs 16 UCDMPs	DM Plans	
	1.1d Number of CBDRM trainings conducted at community level (S 2.2b)	0	24 for village level 2 events for UC level	List of participants	
	1.1e Number of individuals trained in DRR at community level (S 2.2d)	0	480 at Revenue Village level 48 at UC level	List of participants/training reports	
	1.1f Number of UDMC and VDMCs meeting attended by DMA/revenue department (C)	0	176	Visit/activity report	
Output 2: A volunteer base is mobilized, organized and trained in emergency response by fulfilling Pakistan National Disaster Management Plan (NDMP) commitments.					
2.1 Sub-national level emergency response capacities developed made and operational	2.1a Number of volunteer become part of district level emergency response team (C)	0	400	List of volunteers	

Result Chain	Performance Indicators	Baseline 2019	Target (2019-20)	Mean of verification	Risk
	2.1b Number of capacity building programmes conducted for the volunteer base (C)	0	20		
	2.1c Number of volunteer trained on ERT manual (C)	0	400	List of training participants	
Output 3: Comprehensive inclusive CBDRM is implemented to test new innovations and structural and non-structural approaches to DRR and DRM to inform better future development of national disaster risk management fund resilience plans and priorities					
3.1 Non-structural CBDRM approaches to inform better future development of national disaster risk management fund resilience plans and priorities	3.1a Number of UCs vulnerability and capacity assessments conducted (C)	0	16	Vulnerability and Capacity assessment report	
	3.1b Number of structural mitigation measures identified (based on VDMs) (C)	0	110	List of mitigation measures	
	3.1c Number of community level structural mitigation measures approved in consultation with relevant public department (C)	0	110	Meeting minutes	
	3.1d One consolidated Initial environmental examination (IEE) conducted for mitigation schemes (C)	0	1	IEE Assessment report	
3.2 Structural approaches to inform better future development of national disaster	3.2a KM of new river training works (flood management structures) constructed using	0	2.1km	# of schemes completion files/certificate	

Result Chain	Performance Indicators	Baseline 2019	Target (2019-20)	Mean of verification	Risk
risk management fund resilience plans and priorities	community led approach (S 3.1c)				
	3.2b Number of flood protection and river training works constructed/improved (S 3.1e)	0	45	# of schemes completion files/certificate (this is part of above 3.2a)	
	3.2c Number of structures developed/strengthened for land stabilization (S 1.5e)	0	45	# of schemes completion files/certificate	
	3.2d Hectare of land stabilized / made safe against landslides (S 1.5f)	0	45	# of schemes completion files/certificate (this is part of above 3.2a)	
	3.2e Number of schemes/structures (water resource management) completed for drought mitigation (S 1.5d)	0	20	# of schemes completion files/certificate (this is part of above 3.2a)	
Output 4: Increased institutional capacity in PRCS to address issues of gender & social differentiation in NDRMF supported project by ensuring inclusion (gender, environment, social safeguarding and human rights issues) throughout project cycle to protect dignity and rights of people through inclusive approaches					
4.1 Project design of PRCS fully integrates gender, environment and social safeguards issues to protect dignity and rights of people through inclusive approaches	4.1a Number project staff trained on gender, environment and social safeguards (C)	0	50	List of staff/participants	
				Gender Analysis report	
	4.1b % of targets of gender action plan implemented and monitored by PRCS (C)	0	80%	GAP and M&E reports	
	4.1c % of projects/schemes having Environment & Social risk identification and mitigation measures applied (C)	0	100%	Assessment reports	

Result Chain	Performance Indicators	Baseline 2019	Target (2019-20)	Mean of verification	Risk
	4.1d % of women employed in the project (C)	0	40%	HR data	

2.3 Baseline Objectives

The general objective of the baseline survey was to provide a comprehensive picture of the project intervention areas by looking at their institutions and communities with regards to DRR knowledge, behaviors and practices, thus permitting to effectively measure the project impact over the course of the project lifespan. A baseline assessment will be completed at the start of the project, with local stakeholders and communities to measure the status of all indicators and to understand the starting point of key elements of the work against which later progress will be measured. This will enable project indicators at output and outcome level to be measured and tracked.

Specific objectives of the baseline survey were as follows:

- Develop easily replicable and usable tools for data collection at household level.
- Develop effective and representative sampling methods.
- Evaluate community stakeholders' level of understanding and practice of DRR.
- Evaluate community level facilities of health, water and sanitation, livelihood, access to knowledge and resources.
- Evaluate community stakeholders' level of understanding of and adjustment to climate risk and its impacts at community level.
- Evaluate community stakeholder's perception of vulnerability (children, women, elderly and people with disability) before during and after disasters.

3. General Approach & Methodology

3.1 General Approach

A quantitative approach was followed to conduct the baseline study. To collect quantitative data, statistically representative households were surveyed using a pre-structured questionnaire. The findings from the quantitative household survey are presented in this report.

3.2 Methodology

PRCS will conduct field survey utilizing its core staff employed in the four districts of Azad Jammu & Kashmir with parallel monitoring conducted in the field by the Project Implementation Unit at Islamabad.

3.2.1 Sample Size Determination

The baseline survey was proposed to apply a quantitative data collection method. A total of 320 Households in 4 districts of Azad Jammu & Kashmir was the targets population for this baseline survey. The figure has been selected to encompass all 160 villages of four districts of AJ&K. Two respondents from each village has been selected to ensure an equal representation of all project intervention areas.

The ground on which this survey is based is the project results framework. Project team has attempted to acquire baseline data at the output level. Possible key respondents in targeted villages were determined randomly by project team. The questionnaire was designed by PRCS Project Implementation Unit in Islamabad. HH survey questionnaires are based on indicators of output and outcomes according to the project's Results Framework.

Table 2: Distribution of household respondents according to districts

Districts	No. of HH Respondents
Neelum	80
Bagh	80
Sudhnoti	80
Hattian	80

3.2.2 Survey Tools

The survey used a quantitative tool i.e. structured household survey. After initial design, the draft tool was shared with field operational staff and was eventually finalized after incorporating necessary amendments.

To conduct data collection through the household survey with community respondents, the design of the questionnaire focused on the following areas:

- General knowledge on DRR and climate change
- Understanding of hazards, risks and vulnerabilities
- Health, water and sanitation
- Awareness of changing patterns in climate and impact on livelihoods
- Community practices related to DRR
- Mitigation measures (Homestead raising, protecting water resources, safe storage of food, disaster resilient constructions, reforestation, etc.)
- Contingency plans (formal or informal)
- Specific mechanisms for vulnerable groups
- Prevention activities at community-level
- Mock drill exercises
- Adjustment of livelihoods to changing climate patterns
- Awareness of DRR-related services available
- Existence of resource people/groups on DRR
- Shelter or household construction

3.2.3 Field team

A data collection team comprised of 4 members at each district conducted the baseline survey. Each team had to fill the household survey from 80 respondents at the district level. In each district, there were 40 targeted villages in 4 Union Councils. Subsequently two households from each village were chosen randomly for the survey.

3.2.4 Training of field team

All field team members were trained by PRCS PMER Manager on the usage of Open Data Kit Mobile Application to record their survey answers. Team members utilized their smart phones to record all data pertaining to baseline survey. Field team were also given a briefing on data collection ethics, understanding of the tools, quality control and management of the process of data collection. All field data collectors also participated in a full day rehearsal and mock sessions.

3.2.5 Quality control of field data

To ensure quality data, the following measures were taken:

- Training for data collectors and supervisors on ethics and method of data collection including best possible quality data collection and measures to minimize non-sampling errors.
- Probing techniques to ascertain the appropriateness/relevance and consistency of answers, and wherever necessary elaboration of answers.
- Close supervision of the work of the data collectors.
- Random check on the work of the data collectors.
- Use of online data kit that ensures that all data is recorded and no questions are omitted or left blank.
- Feedback by supervisors and solution to bottlenecks, as and when arisen.

3.2.6 Data Accumulation and Management

Appropriate follow-up mechanisms were put in place to ensure that the data was collected, verified and submitted according to the agreed schedule and sample. After data collection all the filled questionnaires were registered in the Open Data Kit platform. Upon registration of the filled questionnaires, the data was coded and processed for entry into the ODK App under strict supervision of the PRCS PMER manager.

3.2.7 Data Entry, Processing & Analysis

A user friendly free data entry application software ODK (Open Data Kit) was used data entry. All the processed data was eventually extracted and analyzed in Microsoft Excel to describe the current situation of the targeted groups based on the objectives of the study. Quantitative data was analyzed using Microsoft Excel software to generate tables.

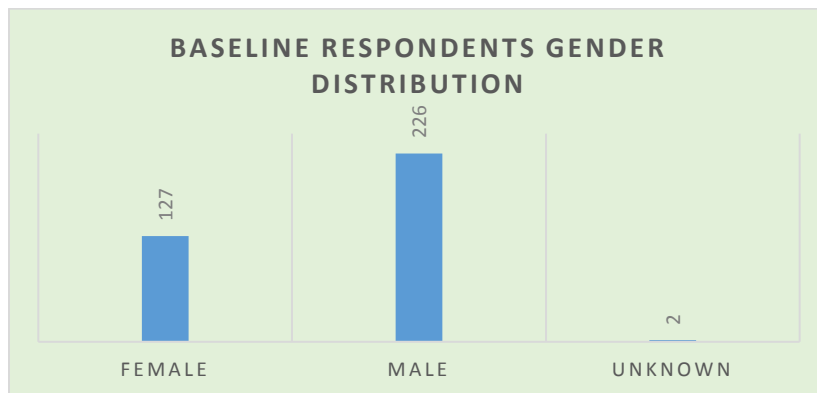
4. Findings

4.1 Respondent Information

This sub-section describes the basic characteristics of the respondents of the household survey. Although the total sample of size of the data was 320 households, the field team had surveyed a total of 355 households. Out of the total of 355 respondents, 354 gave their consent to the household survey and one respondent declined to participate in the survey.

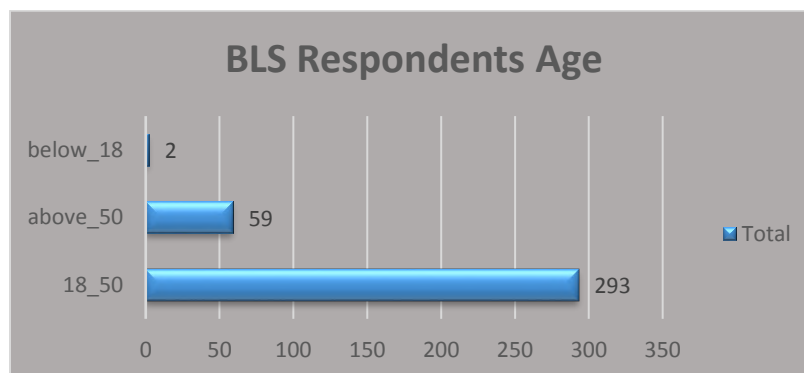
In terms of how many respondents participated in the baseline survey gender wise, a total of 226 Male and 127 Female took part in the survey. 2 respondent's gender has not been recorded and left blank. The following bar chart shows the distribution:

Chart 1: Number of Respondents (Gender wise)



In terms of the distribution of respondents age wise, most of the respondents belonged to the age category of 18 to 50 years old i.e. 293 respondents. 59 respondents were above the age of 50 years and 2 respondents were below the age of 18 years. 1 Respondent's age was not required.

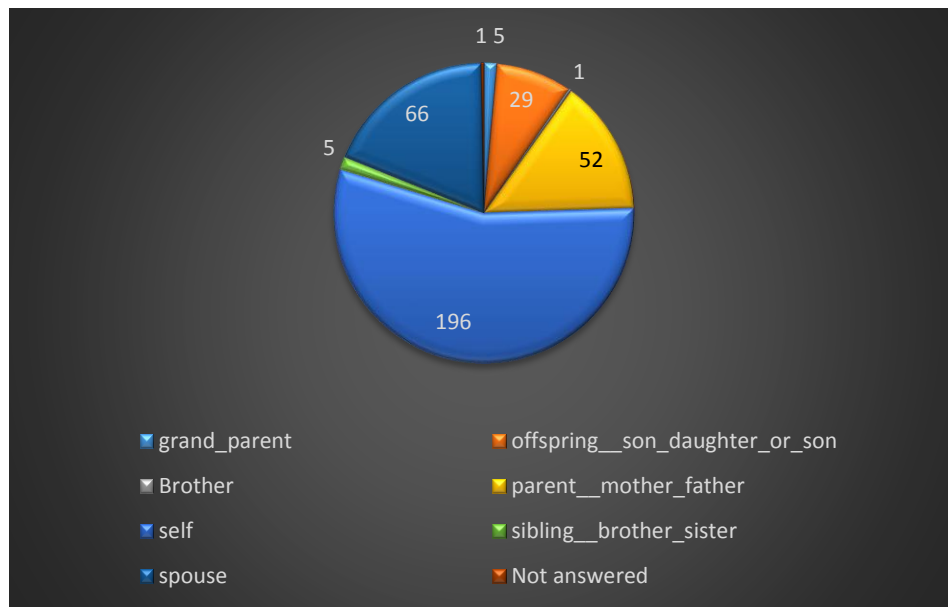
Chart 2: Distribution of Respondents Age Wise



Out of the total respondents; 296 are married, 48 are single, 7 are widows/widowers, 1 is divorced and 3 refused to answer about their marital status. The average size of a household in 4 Districts was 8.06. District wise; the average household size was 8.425 in District Hattian; 9.59 in District Neelum; 7.05 in District Bagh and 7.44 in District Sudhnoti.

The following pie chart shows the respondents that were interviewed for the survey and their relation to the head of the household:

Chart 3: Survey respondent's relation to the head of household



4.2 Disaster Risk Reduction

In this section, knowledge levels are explored in key dimensions of DRR such as hazard, risk and vulnerability as well as climate change. Different sources of knowledge are laid out with a strong emphasis on empirically-gained knowledge as opposed to institutional knowledge.

Respondents were asked to identify the most common disasters in their respective area. Most of the respondents identified land sliding and erosion as the most prevalent hazard in their area followed by heavy rains/snowfall, earthquake and flash floods. 83 respondents identified drought as a major hazard, 97 respondents mentioned the recent epidemic as a major disaster and 9 respondents thought that a heatwave was a major hazard in their respective area. 33 respondents identified other hazards such as conflict on India and Pakistan border, glacier melting and poor infrastructure. The following charts gives a visual representation of the identified disasters:

Chart 4: Identified Disasters

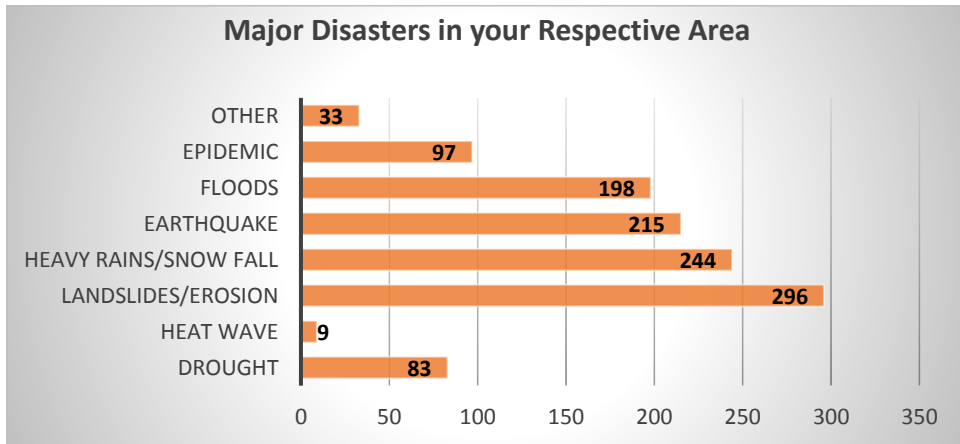
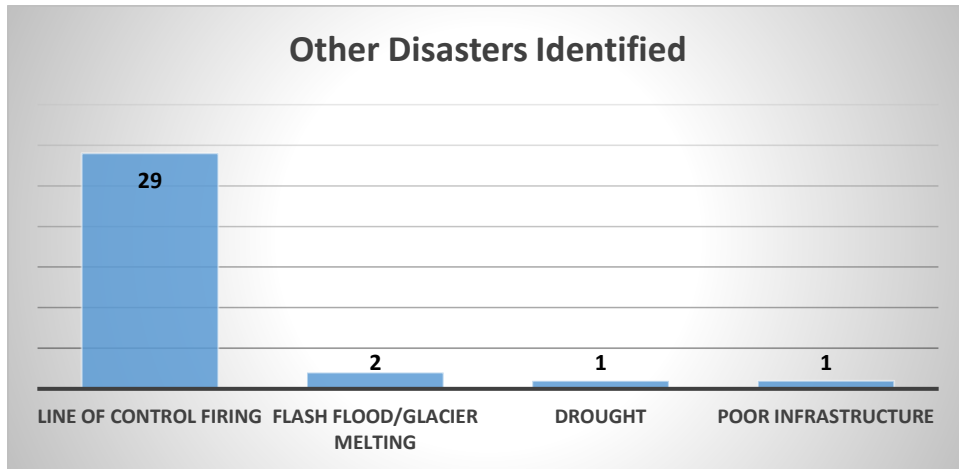
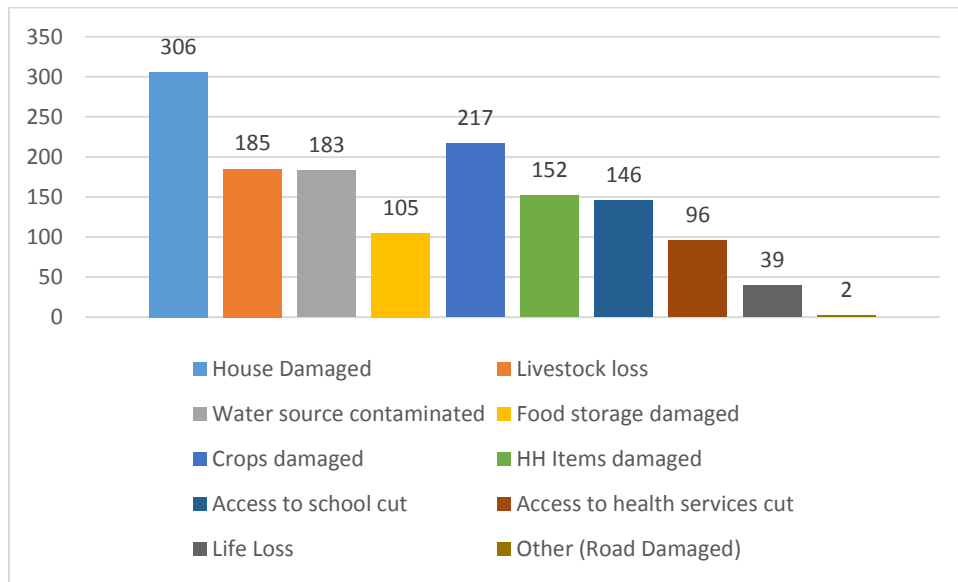


Chart 5: Other Disasters Identified



The subsequent question respondents were asked was how their lives were affected by past and recent disasters or hazards. The majority of respondents answered that their houses or crops were damaged. The rest of the respondents listed livestock loss, water source contamination, damaged household items and food storage damage as the after effects of hazards and disasters. 137 respondents mentioned cut in services related to education, health and transportation access.

Chart 6: Effects of Disasters on Respondents



The following question asked from respondents was whether they knew how to protect themselves and their family from any future hazards or disasters. A total of 51% respondents knew how to protect themselves whereas 49% were not aware of how to deal with any future hazards or disasters.

Chart 7: Knowledge on how to protect family from disasters

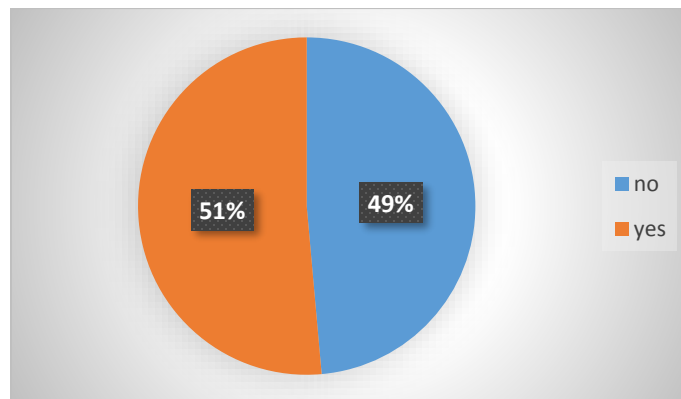
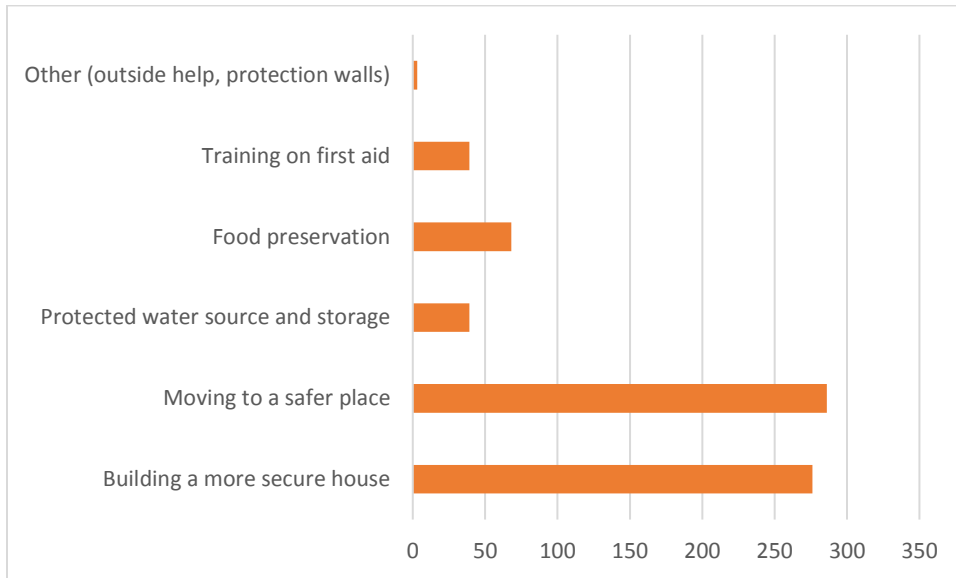


Chart 8 below describes the various types of adaptation and risk reduction measures taken by respondents when faced with disasters. The highest number of respondents highlighted moving to a safer place and building a more secure house as the most effective measure to pre-emptively not be affected by a future hazard or disaster. It is pertinent to mention that due to the

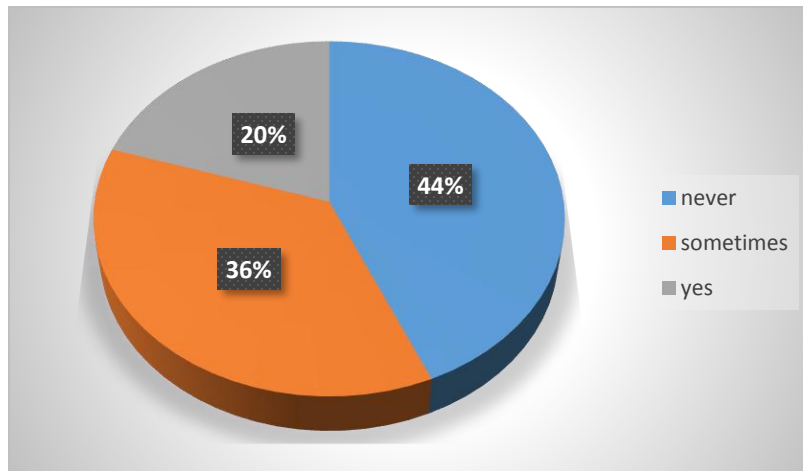
mountainous terrain of AJ&K, building a more secure house is considered a safe way to avoid landslides whereas moving to a higher ground is applicable in cases where houses are located close to the river. Most houses are usually destroyed by flash floods because of their close proximity with nearby rivers.

Chart 8: Adaptation/Risk Reduction measures taken by respondents



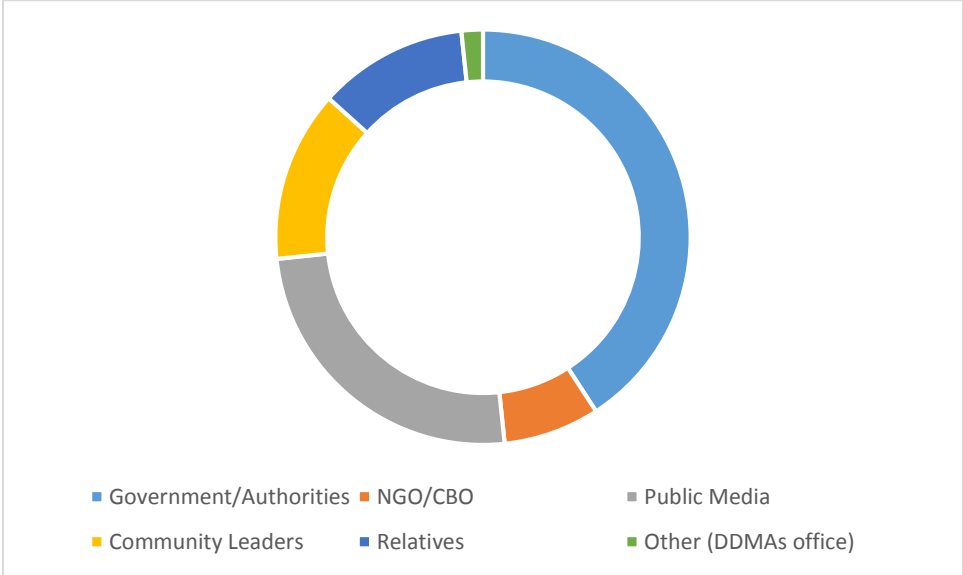
The subsequent questions asked in the section related to disaster risk reduction pertained to asking respondents whether they had access to information during an emergency, presence of a solid risk reduction plan in their village or were any simulation drills conducted in their respective villages. Regarding access to information, a total of 20% replied yes that they had access to information through various media platforms, 44% replied that they had no access whatsoever and 36% were of the view that information was sometimes available.

Chart 9: Access to Information during Emergencies



The subsequent question asked from those respondents who replied yes to the above question was where they received any information. The following gives a visual representation of where they received that information from. Of the 120 respondents, the following chart details the source of their information. The diagram shows that the prevalent source of information at the time of emergencies is usually dispersed by the government/authorities followed by relatives, and public media.

Chart 10: Source of Information during Emergencies



Regarding any Disaster Risk Reduction Plans in the village, the majority of them i.e. a total of 335 respondents answered negatively whereas a total of 7 respondents said that there were DRR plans available and 12 had no idea whether such a plan existed in their villages. Further probing the 7 respondents that answered positively could not recall the content of their DRR plans.

In terms of any simulation drills conducted in any villages where the baseline was held, 320 respondents said that no simulation drills were held in their villages whereas only 3 members of the community replied that such drills were held in their villages. 31 respondents were not aware about any simulation drills. The three respondents who pointed out that simulation drills were conducted in their areas further elaborated that such drills were held by district branches of Pakistan Red Crescent Society.

The last question of this section asked the participants of the household survey whether they had received any training related to disaster risk reduction. The majority of participants i.e. 332 respondents responded negatively whereas a total of 32 respondents said that they had participated in some form training in the past.

4.3 House Information

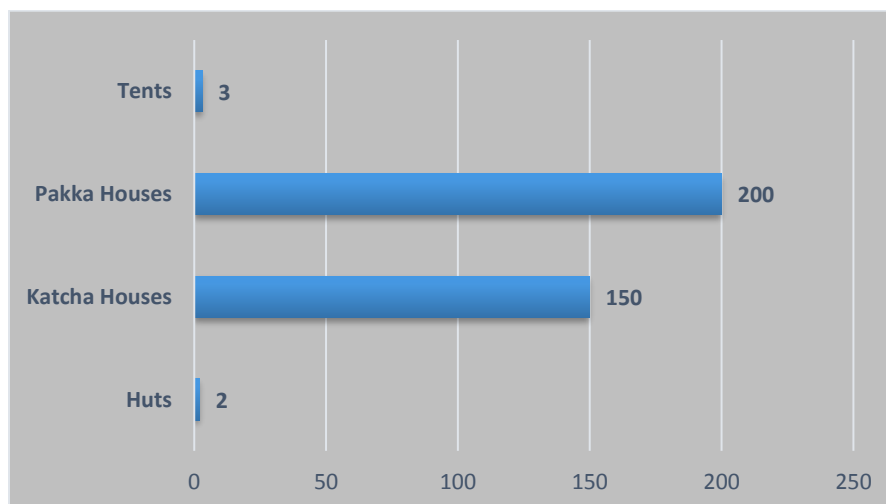
The second section of the baseline report findings deals with information regarding houses of respondents. Questions relating to past history of disasters effects on the structure of their houses to its resilient construction are investigated in this section. In AJ&K, houses are either Pacca Houses (built from bricks or concrete) or Semi Pacca (mixture of mud and concrete/bricks). In certain far flung areas, houses are also made of mud only (Kacha houses in local language). The aim of this section was to gauge the vulnerability of the population's shelter or house structures. One of the primary aims of the project V2R is to create awareness among the local population to better equip and prepare themselves for future hazards or disasters, one of which is to construct safe and resilient houses.

The first question in this section asked from respondents was whether their house was damaged in any recent or last disaster. 71% gave yes as an answer whereas the remaining 29% of respondents' house were not affected by any disaster in the near or distant past. Of the 71% of respondents whose houses were negatively affected by disasters, 45% of the houses were partially damaged; 27% were fully damaged and the rest were slightly damaged.

Subsequently, respondents were asked to list down two or more risks that their houses faced in terms of any disaster that might occur in the future. Out of a total of 355 respondents; 251 thought that their house might be completely destroyed, 221 participants thought that disasters might cause cracks in their houses, 74 respondents were of the view that strong winds or storms might blow off the roof of their houses and 7 respondents listed various other risks such as avalanches and floods.

Respondents were also asked to list the construction quality of their houses; 200 respondents lived in houses built from bricks and cements, 150 lived in Kacha houses (Mud & wood construction, 2 lived in huts and 3 lived in tents.

Chart 11: Construction quality of Respondents' houses



Respondents were also asked to list down the basic facilities in their household. Over 90% had latrines in their houses, only 12.4% had pantries in their households, 3% respondents had hand pumps in their houses, 32.4% had water tanks and 4% had no water or latrine facilities.

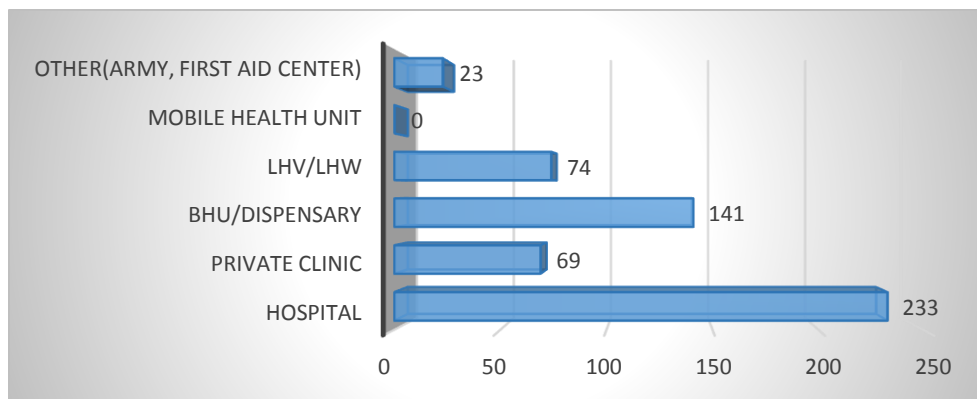
The last question of the household section enquired from respondents whether they had received any training or advice on house construction from any organization or village committee. 91.6% of the respondents had received no training whatsoever and a meagre 8.6% had received some form of advice from community members on how to build resilient houses.

4.4 Health

The third section of the baseline findings was aimed at gauging the current status of respondents' health and its related facilities offered in their respective areas. Respondents are asked of their health history, prevalent common diseases and any precautions taken by community members to safeguard their health.

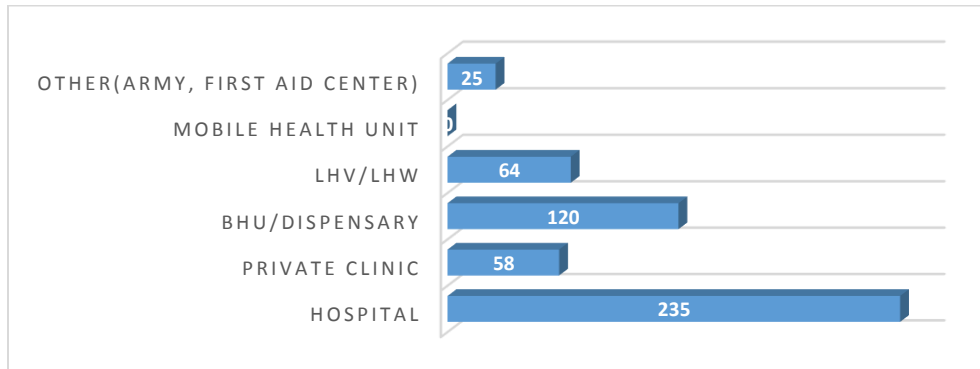
The first three questions dealt with health facilities, their accessibility and nearest distance. The following chart shows different facilities availed by respondents in their respective villages.

Chart 12: Health facilities availed by Respondents



The follow up to the first question was which of these facilities were available during a recent disaster or an emergency. Chart 13 gives a holistic view of the situation of these facilities during an emergency.

Chart 13: Health facilities availed during an emergency or disaster



Regarding the nearest distance to health facilities in their respective areas and union councils, the following chart clearly explains the distance that respondents have to travel to access basic health facilities. The majority of the respondents have to travel a distance of 2 to 10 kilometers. What is alarming is that sizeable number of respondents have to travel from 10 to 50 kilometers.

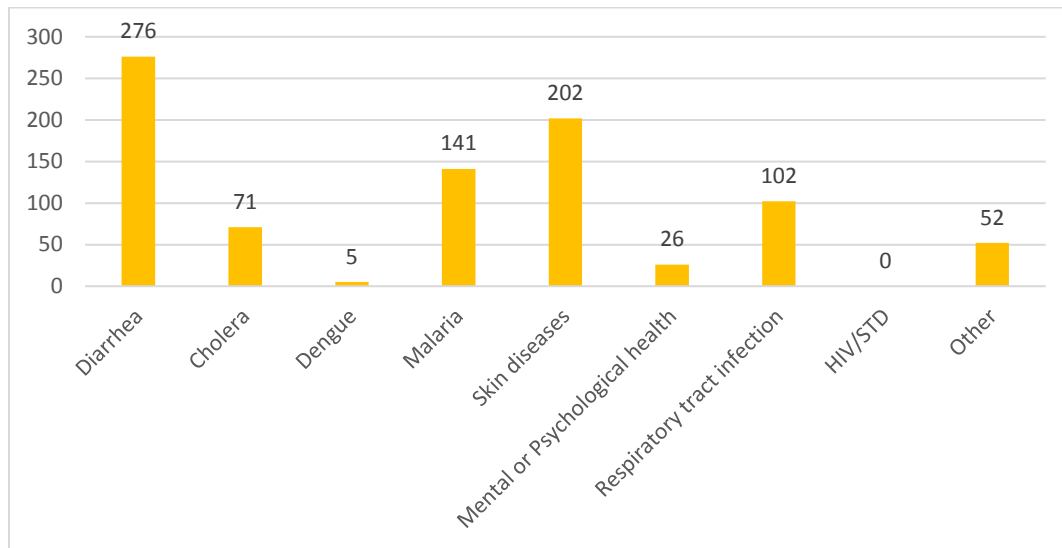
Chart 14: Distance to Health Facilities



Next, respondents were asked about the access of pregnant women to antenatal care. 48% of respondents mentioned that their pregnant household members do have access and avail antenatal care whereas the rest of the respondent i.e. 52% responded that pregnant women in their households do not have access to such important and necessary care. Majority of these services were available at local hospitals (40%), BHUs (15%), LHWs (17%) and private clinics (26%).

Furthermore, respondents were asked to identify the most common diseases that might have affected their household members in the past two years. Chart 15 shows the various diseases that respondents identified during the data collection process.

Chart 15: Identification of Common Diseases



A total of 52 respondents also identified various other diseases that were identified. These were:

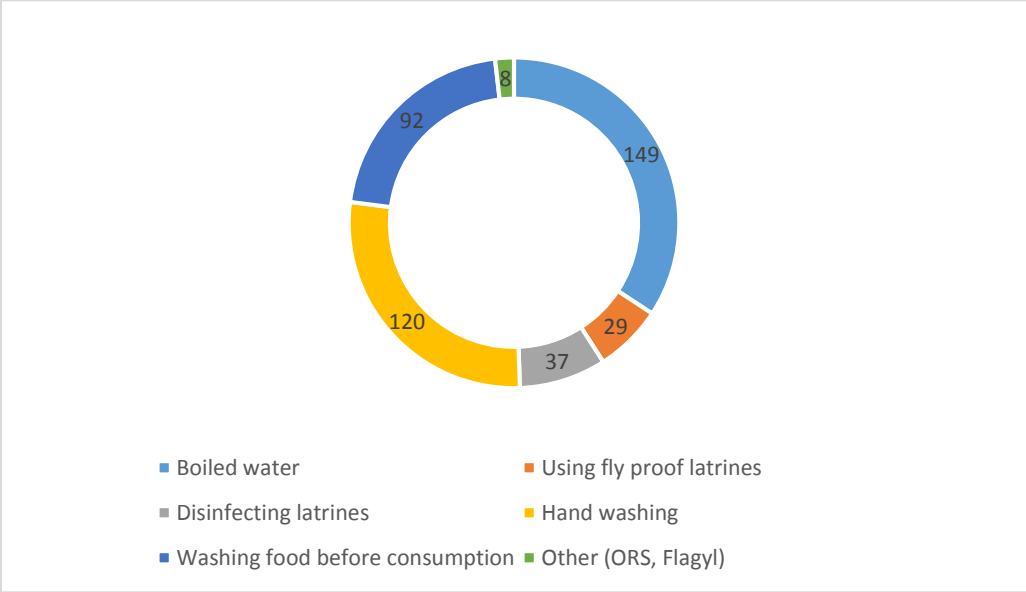
- Hypertension
- Blood Pressure
- Maternity Complications
- Diabetes
- Pneumonia
- Tuberculosis

The following three questions dealt with knowledge of what causes diarrhea, its prevention and how to deal with cases of the disease. During the last two weeks, only 31 respondents had had diarrhea. Further inquiry in to the causes of diarrhea, respondents listed the following reasons for its occurrence:

- Dirty Hands
- Overeating
- Contaminated Water (Majority respondents identified this as the major cause)
- Weather change
- Open defecation
- Unwashed food
- Rotten food or fruits
- Over eating

43.6% of respondents knew how to prevent diarrhea whereas 56.4% did not possess the knowledge of its prevention. In cases where respondents knew how to prevent diarrhea, the following chart gives a cumulative view on preventive measures identified by respondents:

Chart 16: Prevention of Diarrhea methods



When asked whether they knew how to make an oral rehydration solution (ORS) at their homes, 62% replied yes whereas the remaining 38% did not know how to make the solution. Out of the 38% that did not know how to make the solution, almost 50% knew where to procure it from whereas the rest of half did not even know what the solution was or where to procure it from.

Participants of the survey were also asked they have any mosquito nets at home or have received any from any organization. A total of 19% did have a mosquito net at home whereas the large majority did not possess them. In cases where participants possessed the nets, they were asked as to who uses them the most. More than 90% responded that they did not use the mosquito nets and in cases where they did, they are mostly used by children and pregnant women.

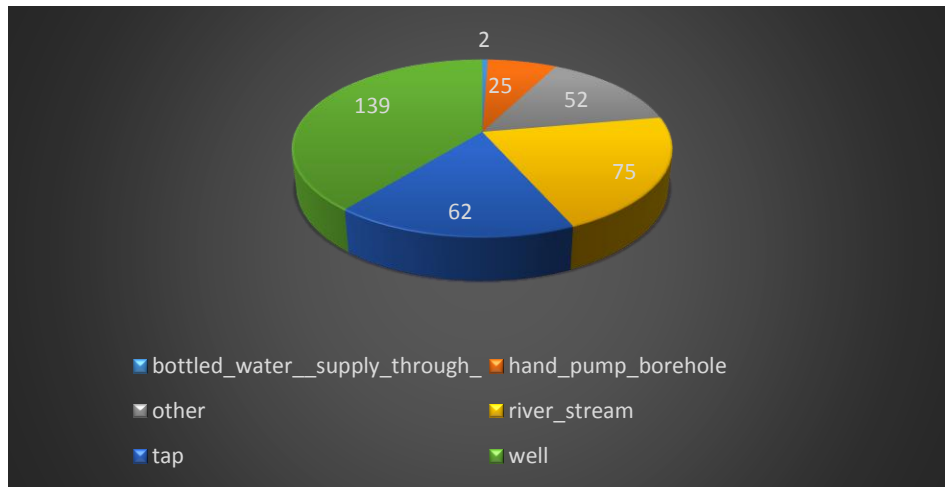
4.5 Water & Sanitation

Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments. This section

asked the community members on the facilities of water and sanitation facilities in their respective areas.

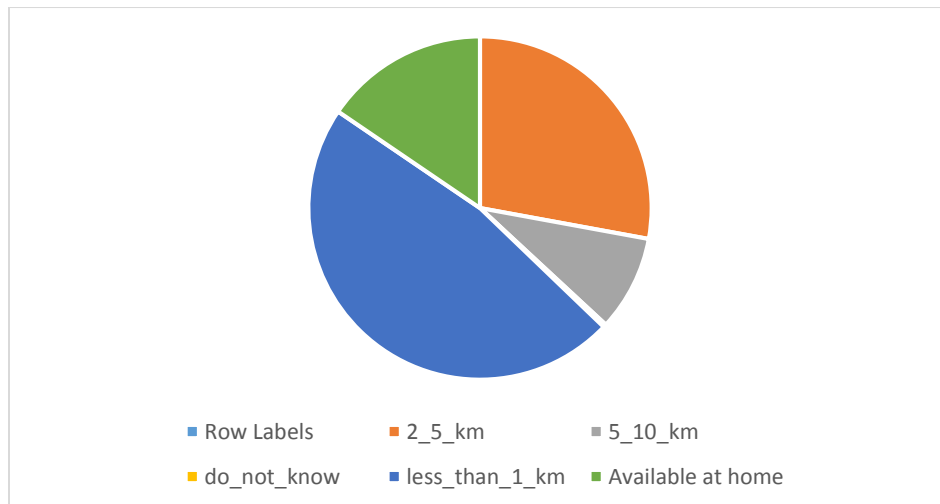
As per their recorded responses; their main source of drinking water is through wells (139), river streams and tap water. Other sources include spring water, pipeline, fountains and tab stands.

Chart 17: Source of Drinking Water



Based upon response results, the following chart shows the amount of distance that respondents have to travel to access the nearest water source.

Chart 18: Distance to water source

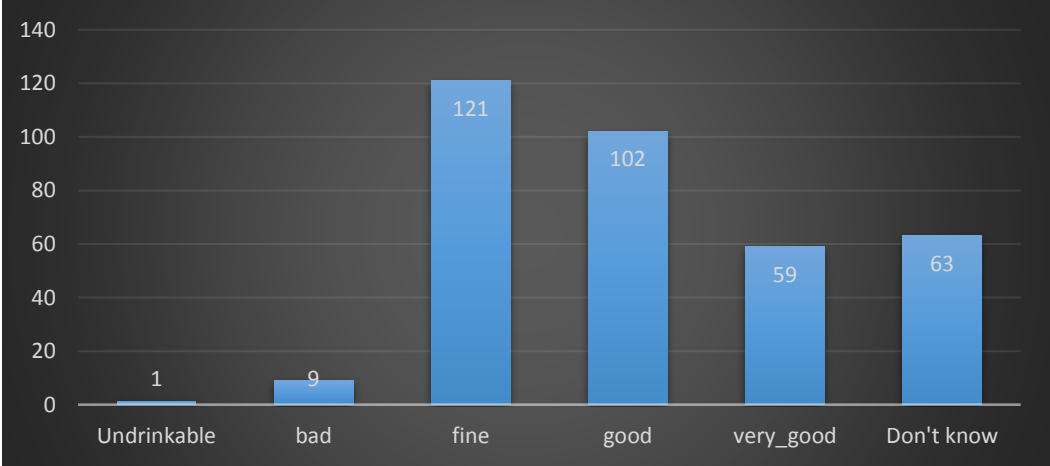


Regarding what households use to store drinking water; 67% respondents use water coolers, 27% use tank drums and 19% use jerry cans or drums. In terms of purifying water before drinking, only a small fraction of 8% purified their water using mostly boiling procedures.

Around 61.5% of houses of respondents have flush latrines with septic tanks, 35.5% use pit latrines with slabs and the rest of the respondents engage in open field defecation due to unavailability of proper latrines. 86% of respondents always use soap when they wash their hands. Only 6% of the respondents have ever attended a community meeting on hygiene training.

When it came to fetching water from water sources, 75% of the respondents mentioned that women and girls are primarily responsible for the task. Households also do not get drinking water in the same required quantity all year as the majority of answers (65%) suggested. These are usually due to various factors such as climate change. Regarding the quality of water in the respective areas, the following chart describes the various perceptions of the local communities:

Chart 19: Quality of Water in AJ&K



If the water is considered bad or undrinkable, it is usually attributed to its color and taste which eventually to stomach viruses or problems in their area. Most of the respondents however thought that the water quality in their areas were mostly clean.

For purposes other than drinking, 58% of the population used different water sources for purposes like washing and bathing. On the other hand, 42% of the respondents used the same drinking sources for other purposes as well.

4.6 Climate Risk Assessment

Knowledge levels of respondents of the household survey on climate change were explored through questions on the changes observed in different areas, namely disaster patterns, rainfalls and temperature. The first three questions pertained to assessing the frequency of diseases during summers, winters and rainy seasons compared to five to ten years ago. The following charts show the level of frequency based upon a scale of responses.

Chart 20: Frequency of diseases during summers

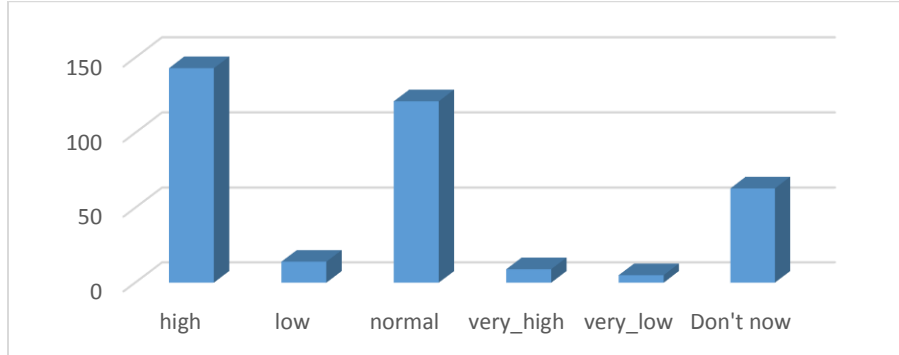


Chart 21: Frequency of diseases during winters

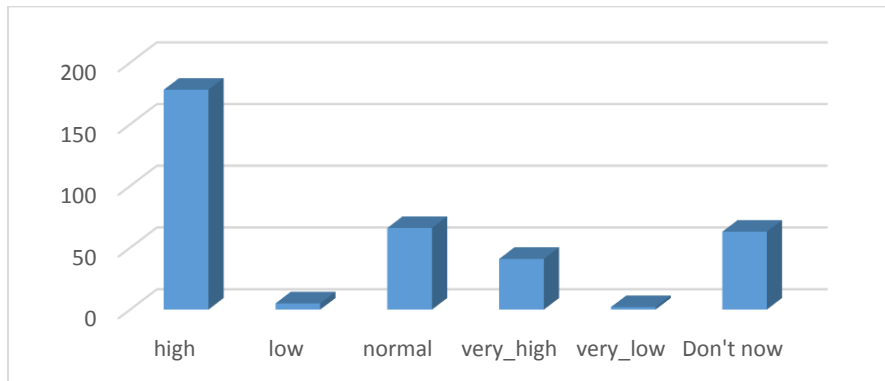
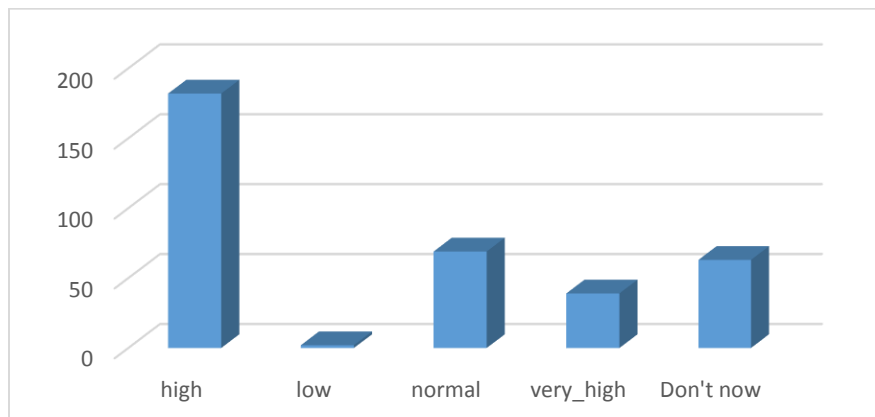


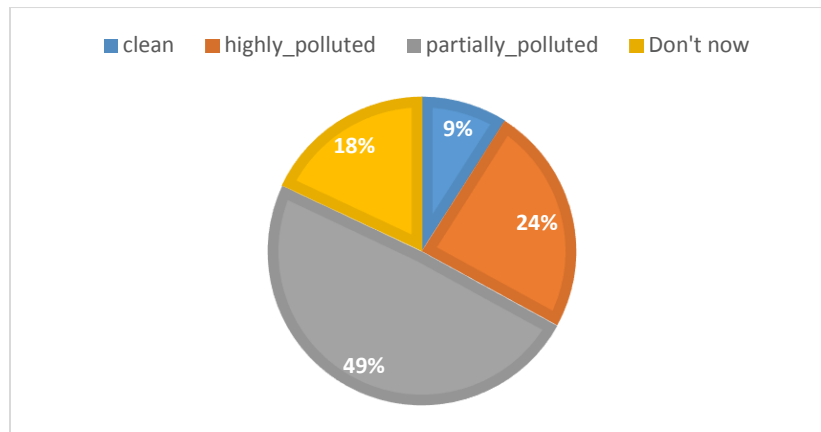
Chart 22: Frequency of diseases during rainy season



As evident from the charts above, most of the respondents thought there was a higher frequency of diseases during the seasons as compared to five to ten years ago. Also a sizeable majority thought that things were normal as compared to years ago. It is also worth noticing that these questions were a little tricky as a noticeable number of respondents did not know on how to make comparisons of the present prevalence of diseases with a time period that was five to ten years ago.

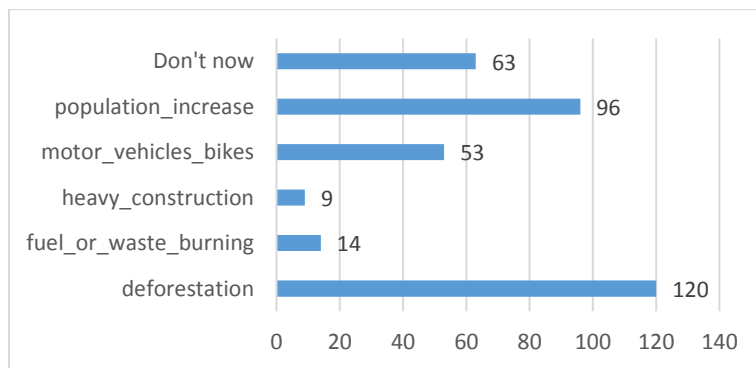
Participants of the survey were then asked about the air quality as compared to ten years ago. 49% of the respondents thought that the air was partially polluted whereas 24% considered it highly polluted. A very small fraction still thought that the air was as clean as it was ten years ago.

Chart 23: Air quality compared to ten years ago



The follow up question to determining the air quality compared to ten years ago was determining the cause of the diminishing air quality. The following visual representation shows how various factors contributed towards the decrease in air quality. The prime reasons as highlighted can be attributed to deforestation, population increase and air pollution.

Chart 24: Reasons for diminishing air quality

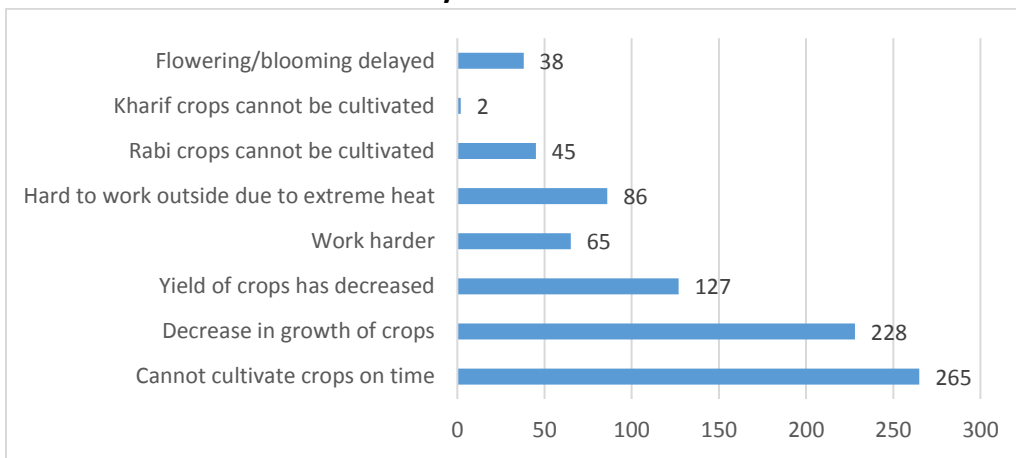


4.7 Livelihood

In order to gauge the resilience of communities, this section of the baseline survey analyzes the livelihood sources of respondents that is usually adversely affected during hazards and disasters. Regarding the main sources of the target communities in the district; 37% of households survived as daily wagers, 33% were employed on a job, 7% on agricultural land, 18% through livestock and the remaining survived on pensions or help from other family members.

When asked whether their livelihood had been affected by a recent disaster, 13% of respondents were not affected whereas the rest of the respondents had been either partially affected (52%) or totally affected (35%). Due to recent disasters and weather changes, the target population had been affected to a great extent. These are listed in visual chart below:

Chart 25: List of ways livelihood has been affected



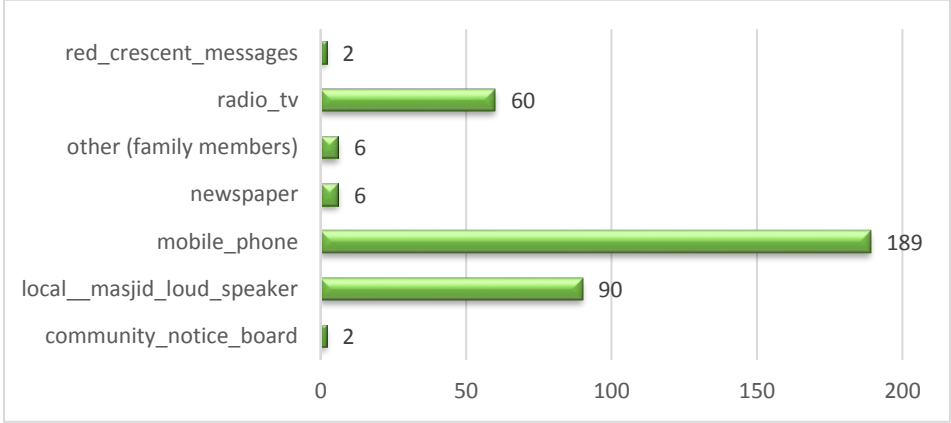
When asked whether their income is enough to buy basic necessities such as food and water, 28% of respondents thought that it was not enough, 50% thought it was barely adequate and 22% considered it enough to buy enough food for their family. Over 90% of respondents thought that food was usually available during and after disasters. 86.7% had never received any financial assistance from the government or any organization whereas the rest of the respondents had at some point received some form of financial assistance.

4.8 Beneficiary Communication

Beneficiary communications work right across the disaster environment i.e. preparedness; early warning; disaster and post-disaster environments. It is a cross-cutting function that serves and facilitates greater quality and accountability of aid delivery. It is a participatory approach that empowers communities by delivering potentially life-saving information into the hands of the people who need it most.

During recent disasters, respondents were made aware through various mediums on latest news and information regarding relief efforts. The chart below lists the various mediums through which information were dispersed to communities.

Chart 26: Mediums through which information was received



When asked about the effectiveness of the above mediums, most preferred to receive information through mobile phones, local mosque loud speakers, radio and red crescent volunteers in their villages. Although PRCS has established community accountability and engagement mechanisms, only 26% of the total respondents had ever given any feedback regarding its services. Those who have given any feedback passed their suggestions or complaints mostly through PRCS engaged volunteers in the field. Regarding preferable medium or tool for giving feedback; 193 respondents preferred SMS/phone call, 105 respondents would prefer to use suggestion boxes, 300 respondents would prefer face to face meetings and only 54 would use letters or postcards. 2 respondents could not suggest any way and suggested that there is no good way to register complaints.

5. Conclusion

Repeated experiences of various types of disasters, and information received through the media have provided community members in Districts Neelum, Sudhnoti, Bagh and Hattian with a solid knowledge on hazard and vulnerability. It has also allowed them to develop essential and simple preparedness measures that can make the difference when a disaster strikes. The project V2R that aims to work at making the communities disaster-resilient aims to build on this existing knowledge and reinforce it mainly by ensuring that good practices are singled out, promoted and disseminated, and that knowledge is institutionalized and shared in a systematic way.

The baseline survey identified informational and knowledge gaps at community levels which requires addressing through targeted and relevant training and awareness-raising campaigns, in particular in the areas of CBDRM, climate change and emergency response services. Key institutions in the area of DRR such as Disaster Risk Management Committees, Emergency Response Teams, DDMA's need to be strengthened and enhance coordination before, during and after a disaster. In this process, community members especially women, youth and people with disability have a major role to play that should be adequately reflected through their formal identification and involvement in each of these institutions.

The Vulnerability to Resilience Project implemented by PRCS can prove to be instrumental in contributing towards making communities of four districts of Azad Jammu & Kashmir disaster-resilient if it manages to effectively address the existing informational and knowledge gaps, to create sustainable and institutionalized knowledge networks at community levels as well as to establish functioning coordination mechanisms that are active during, but also before disasters, and that will survive beyond the project lifespan.

6. List of Annexures

Annex 1: Terms of Reference of the Baseline survey

Annex 2: Household Survey Questionnaire

Annex 3: List of Household Survey Respondents (Excel File)