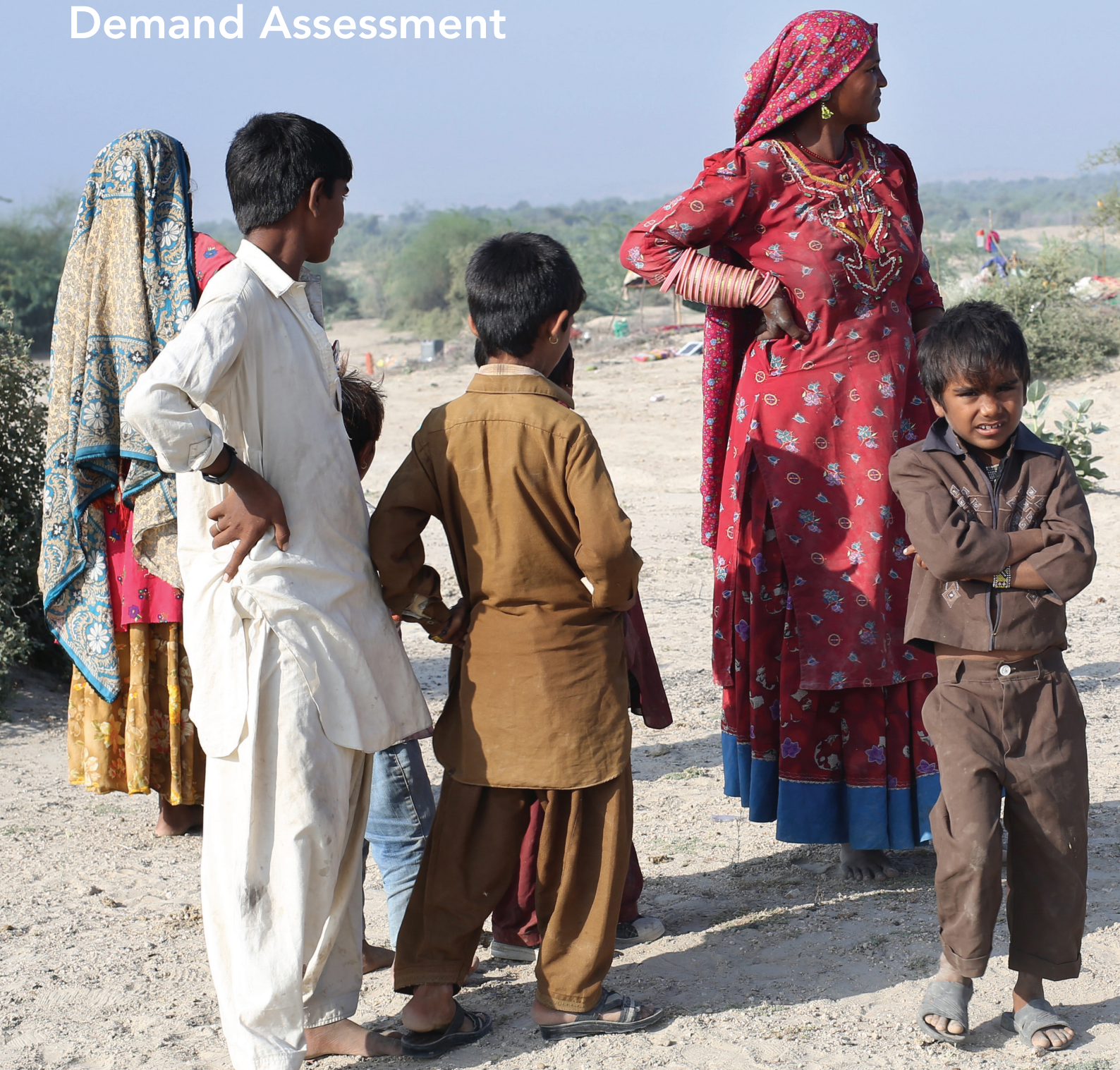


Developing a Disaster Insurance Framework for Pakistan: Demand Assessment



Supported by

REPORT



Demand Assessment for Climate Risk Insurance in Pakistan

Munich Climate Insurance Initiative. September 22, 2016

About

The Munich Climate Insurance Initiative (MCII) was launched in April 2005 in response to the growing realization that insurance-related solutions can play a role in adaptation to climate change, as advocated in the Framework Convention and the Kyoto Protocol. This initiative brings together insurers, experts on climate change and adaptation, NGOs, and policy researchers intend on finding solutions to the risks posed by climate change. MCII provides a forum and gathering point for insurance-related expertise on climate change impact issues. MCII is hosted at the United Nations University Institute for Environment and Human Security (UNU-EHS) in Bonn, Germany.

The United Nations University (UNU) – the academic arm of the United Nations system – implements research and educational programmes in the area of sustainable development, with the particular aim of assisting developing countries. The United Nations University Institute for Environment and Human Security (UNU-EHS) addresses risk and vulnerability aspects of human security and the consequences of complex environmental hazards for sustainable development.

Acknowledgements

This report has been prepared by Impact Consulting and has been commissioned by the Munich Climate Insurance Initiative under the aegis of the Developing a Disaster Insurance Framework for Pakistan project.

This document has benefitted from the expertise of MCII's team, members, peers and colleagues who have helped shape and refine this document. These efforts are gratefully acknowledged and deeply appreciated.

Questions, comments may please be sent to info@climate-insurance.org

This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of developing countries. However, the views expressed and information contained in it are not necessarily those of or endorsed by DFID, which can accept no responsibility for such views or information or for any reliance placed on them.

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1. Executive Summary

Introduction

Pakistan is suffering the consequences of a rapidly changing climate and has been plagued with frequent extreme weather events resulting in a loss of lives, livelihoods and assets. It is estimated that since 1973, 77% of the population has been affected by floods and other natural hazards.

These hazards devastate poor communities by destroying their livelihoods, assets, and opportunities for a better life. Many affected communities face not only immediate destruction, but also longer-term consequences that undermine their welfare: lost livelihoods, worsening food security, worsening poverty, worsening ability to send their children to school.

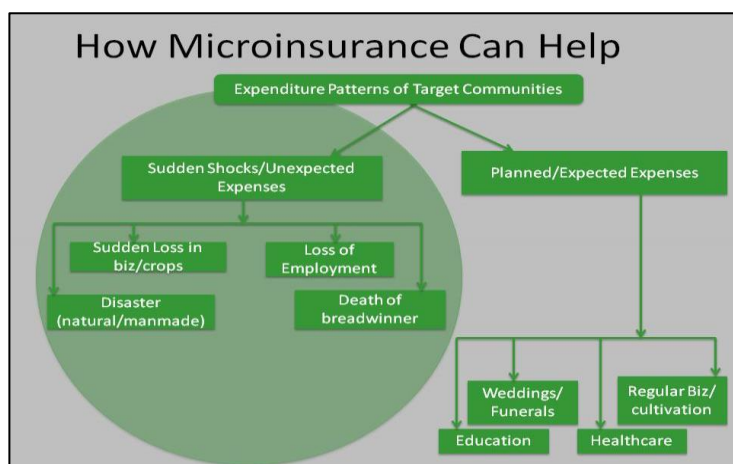


Figure 1: How Micro Insurance Can Help

The Government of Pakistan, National Disaster Management Authority is striving to improve the disaster management system in the country and taking various measures to introduce initiatives

¹ Strategic decisions related to the Fund include determining start-up costs, fixed administrative costs, recurrent event reserves, reinsurance costs, provisions for outstanding losses, catastrophic reserves, number of beneficiaries to be served, premium subsidies, scope of insurance cover, risk exposure and level of potential payouts

to alleviate the suffering of disaster affectees. Among them is the National Disaster Insurance Framework with the aim to provide climate risk insurance to the poor to reduce their vulnerability and improve their socioeconomic wellbeing in the long run.

Assessing Demand for Climate Risk Insurance

The purpose of the Demand Assessment is to support the design of a National Disaster Insurance Fund that is in line with NDMA's vision and mandate, is viable and sustainable, and fits the specific needs of vulnerable communities in Pakistan.

Goals of the Demand Assessment

- Confirm weather-related events as a real threat to the resilience of low income communities in the five study areas; improve understanding about the weather-related risk and coping strategies to manage the loss and damage associated with these weather risks by at-risk communities
- Assess the implicit and explicit demand for microinsurance to mitigate against weather-related risks, designed to benefit the chronic and the transitory poor in Pakistan, and use the results to inform product design and implementation;
- Inform the Fund design process to determine the optimal design option that would cater to the needs to vulnerable low-income communities

In light of the above mentioned purpose, the MCII project consortium undertook a Demand Assessment to not only explore this opportunity space, but also understand the challenges of such a parametric index insurance-based approach. To achieve the optimal Fund design option, a variety of costs and strategic decisions must be made for which detailed exploration is required. Thus the purpose of

the Demand Assessment is to frame a key set of questions within a solid methodological framework, which will help to reach crucial costs and strategic decisions¹ by providing data and information as inputs to the size of the Fund, capitalization requirements, risk exposure, and level of payouts over time.

Assessing Demand for Climate Risk Insurance – the Process

In January 2015, five districts² had been selected by project stakeholders through a participatory process, as study areas for the piloting of the programme; Charsadda, Poonch, Ziarat,

² For details of the district shortlisting and selection process, please refer to the 'Methodology, Technical Considerations, and Selection of Study Areas' document (February 2015)

Tharparkar, Rawalpindi. The prime factors for the selection of these districts were selected by the stakeholders in light of two factors:

- a) The frequency and intensity with which the selected districts experienced climatic stressors, and
- b) Ease of access to communities, security concerns

The Demand Assessment was implemented in the selected districts of Pakistan by a team of skilled enumerators using a comprehensive Demand Assessment instrument. The instrument builds upon international best practice, Pakistan's experiences with microinsurance, MCI's experience and expertise in designing and implementing weather index-based microinsurance solutions. In addition to being peer reviewed by international experts, the Assessment benefits from:

- The Climate Risk Adaptation and Insurance in the Caribbean (instruments from 2011, 2013)
- The Benazir Income Support Programme's (BISP) Poverty Scorecard
- The Pakistan Poverty Alleviation Fund's Livestock insurance survey
- Make references to the Govt of Pakistan's Household Survey, Pakistan Social and Living Standards Measurement survey, according to the needs and objectives of the task

In keeping with the three overarching goals of the Demand Assessment, 1,410 households were surveyed in communities located in the five districts. The survey provided valuable insights to the profile of the target group – socioeconomic data, gender and literacy to understand types of climate stressors they face and how these affect them. At the heart of the Demand Assessment instrument lie two economic tools, *Willingness-to-Pay*, *Ability-to-Pay*³ that are collectively used to forecast premium rates, future enrollment in the proposed climate risk insurance programme, as well as sustainability. The socioeconomic information coupled with the cost benefit analyses derived from the Demand Assessment, are inputs to the development of an insurance contract that addresses the needs of the vulnerable, low-income population.

³Willingness-to-Pay, Ability-to-Pay surveys are undertaken from two main perspectives; to measure the benefits to a society arising from the provision of a good or service as part of a Cost Benefit Analysis (CBA) or to predict demand patterns as inputs to pricing and distribution decisions (Levy & Quigley 1993; Mills et al 1994; Donaldson et al 1995). These methodological tools facilitate the estimation of the capacity to pay

The Demand Assessment instrument, sampling methodology, and other relevant details are included as technical annexes to the report.

Key Findings

This report presents major findings that stem from the Demand Assessment conducted in five districts of Pakistan i.e. Rawalpindi, Charsadda, Tharparkar, Ziarat, and Poonch. The Demand Assessment results highlight the severity of the climate change induced vulnerabilities of low-income group communities in both urban and rural areas across the five districts. The main focus of the research was to analyze the needs of the low-income groups and their coping mechanism in case of weather related events. The findings emphasize the need to have proper coping mechanisms in place, for events related to climate change, in order to mitigate the adverse effects on livelihoods of low income groups in Pakistan.

Households may adopt different adjustments in the face of changes in climatic conditions. Analysis suggested that the adjustments were not homogenous across districts, and it might be attributed to different climatic conditions/challenges faced in the specific district/locality. Adjustments included measures such as tree plantation in Rawalpindi and Charsadda, and the building of water harvesting scheme in Tharparkar district. In Ziarat district the two most dominant adjustments reported by respondents were the strengthening of houses and the plantation of trees. In Charsadda, major adjustments in the face of flashfloods were 'move to secure shelter', 'strengthen the house', 'keep emergency food supplies' and/or 'migration'. In Rawalpindi, the major adjustments came out to be 'keep emergency food supplies', 'strengthen house', and 'move to a secure shelter'.

As the households face different climatic conditions and they try to adjust themselves, they are likely to face constraints or difficulties during the adjustment process. Lack of money was the main constraint in the adjustment process.

The prevalence of insurance was found to be very low overall as only three percent (3%) of all the respondents i.e. 45 out of 1,410 reported that their household member(s) had any kind of insurance. It was found to be highest within Poonch district where 11% respondents affirmed that their households were availing some kind of insurance policy.

of certain social groups in a search to find out the hypothetical monetary value for social protection programmes and in determining how to achieve adequate risk cover for individuals at an affordable price.

Some perception statements were also included in the Demand Assessment instrument to capture the opinions of respondents about insurance in general. Only 10 respondents out of 1,410 affirmed that they had heard about weather related microinsurance. This means that a lot of dissemination effort would be required before launch of such insurance products. Overall around 31% respondents (out of 1,354 who responded to this question), indicated a high Willingness-to-Pay for climate risk insurance, if made available. It is worth mentioning that Pakistan does not have a well-documented or highly banked economy. In this scenario, 31% affirmative response highlights the perceived value of climate risk insurance in the eyes of the beneficiaries.

Willingness-to-pay and *Ability-to-Pay* are methodological tools to facilitate the estimation of the capacity to pay of the target group, to find out the hypothetical monetary value of the disaster risk insurance program, and in determining how to achieve adequate risk cover for vulnerable, low-income individuals at an affordable price. These two tools have been employed as part of the Demand Assessment to predict demand patterns for climate risk insurance as inputs to pricing and distribution decisions⁴ for insurance companies.

In the Demand Assessment, *Willingness-to-Pay* was determined on the basis of the question ‘would you like to purchase weather (micro) insurance if available? Overall 31% of respondents showed their *Willingness-to-Pay* micro insurance, 69% chose otherwise. Tharparkar, which ranks amongst the poorest districts of the country, has shown 56% respondents are willing to pay for microinsurance⁵. This implies that people decide to buy microinsurance based on several contributing factors including vulnerability, socio economic status and available coping mechanisms.

In the Demand Assessment, *Ability-to-Pay* was determined by the question: ‘How much would you like to pay per year (premium) and for how many years?’ More than 47% showed *Ability-to-Pay* up till 1000 PKR, 22% had *Ability-to-Pay* between 1- 2000 PKR and 30% could spend more than 2000 PKR on amount of premium.

Occurrence of different climate events, and coping mechanisms, were also analyzed. Although the oft repeated response in terms of coping mechanism was ‘did nothing’, other coping mechanisms varied across events and districts. As far as the amount of savings was concerned, respondents from Ziarat and Rawalpindi had a higher savings in comparison with other districts. Overall only 13% (i.e. 182 out of 1410 respondents) households have a saving account.

4 See for example (Levy & Quigley 1993; Mills et al 1994; Donaldson et al 1995).

Households save for various purposes and they may like to reserve some amount for emergencies as well.

In terms of loans, around 66% of respondents did not report any loan, while another 26% report having availed one loan in their household. Relatives and friends/neighbors appeared to be most frequent sources of credit in all districts except in Tharparkar where shopkeeper and NGOs appear to be the main sources of credit. People facing extreme weather conditions may also seek loans that they use in the recovery/rehabilitation process.

The overall proportion of those respondents who received or sent local or foreign remittances was low. Around 4% of the respondents received local remittances (i.e. from within Pakistan), and the average amount was calculated to be PKR 177,000/- in last year on the basis of information provided by the respondents.

Regarding gender, generally, the opinions of a large majority of respondents (90%) reflected that women cannot decide on their own to purchase insurance. Women may buy insurance after seeking permission from their husbands (according to 91% of respondents).

In case of monthly household expenditures, the average was calculated to be **PKR 24,575/-**. Overall, it was calculated that around 58% of the household expenditure went into food. As the prevalence of insurance was recorded to be very low, the insurance premium formed a very tiny fraction of the expenditures.

The ownership of assets by the household can be a good estimate of the financial wellbeing; respondents from Ziarat had relatively high asset holding position in terms of agricultural land, cars, and motorcycle as compared to other districts. It is thus plausible, based on comparatively higher asset holding, that *Ability-to-Pay* premium for microinsurance may be relatively higher in Ziarat as compared to other districts.

Preliminary Conclusions

While a detailed discussion of the policy and process implications of the Demand Assessment are presented in the report on Fund design, and as such are out of the purview of this document, some pertinent, initial conclusions are presented below.

- The Fund will be established by NDMA to serve the needs of low-income, vulnerable communities. Due to the (high) incidence of poverty, policy holders will be in need of

5 Figure 6, gives a detailed district wise data for Willingness-to-Pay

support to get insurance cover, so government subsidies will play a critical role in ensuring the success of the National Disaster Insurance programme.

- Distribution channels, aggregators must be able to make insurance payouts to the beneficiaries in a timely and effective way. The selection of the right delivery channels is the key to the success of this programme. This fund is being set up to provide insurance to the chronic poor and the transitory poor.
- For the chronic poor, we recommend BISP as the most appropriate delivery channel because these people are also the recipients of monthly cash transfers, life insurance and other related benefits through the network of BISP. This provides a cost-effective opportunity for the fund to utilize the unique infrastructure and distribution channels BISP has already established to reach the chronic poor.
- Our estimates put the potential number of beneficiaries that could be served by the Fund at 246,000 in the five study areas. However, the actual number of beneficiaries will be determined by two factors: a) the outreach the government wants or is able to cover, which in turn is decided by the resources available; b) the number of the transitory poor and the chronic poor in each district.
- Low insurance penetration is a result of low awareness of insurance and low income levels in the five study areas. Therefore concerted efforts have to be put into client education and awareness raising, as well developing alternative distribution mechanisms such as bundling insurance with loans in the case of the transitory poor.
- Coping strategies such as doing nothing, relying on savings, borrowing from friends and family, taking credit at high interest rates, distressed sale of productive assets, etc., employed by the target population all lead to deeper poverty in the long term. By providing vulnerable individuals with risk transfer mechanisms such as climate risk insurance, the social resilience of at-risk individuals can increase over time.

2. Pakistan – an Overview

Country Profile

Pakistan is the second largest country in the South Asian region and tenth in the World, with a land area of 803,940 km². Pakistan has 1,046 km coastline along the Arabian Sea and the Gulf of Oman in the south. On the eastern side, Pakistan has borders with India and on the western

side with Afghanistan. Iran and China have borders with Pakistan on the southwest and far northeast respectively.

Pakistan has a very large population, the latest population statistics from the Pakistan Economic Survey 2013-14 indicate that the population was 188.1 million people in 2014 (the world's sixth most populous country). Large population puts a great toll on resource scarce country in terms of quality of services and quantity of opportunities.

In 2010, the Global Peace Index placed Pakistan near the bottom — 145 out of 149 countries (Global Humanitarian Assistance, 2010). This ranking was based on the unprecedented increase in insecurity and terrorism incidences in the country. Violence and security continue to increase and this is accentuated by terrorist attacks. These intertwined and multiplex insecurity-related problems impose a heavy burden on the Pakistan economy and adversely impact on the operating environment for businesses and foreign investments.

Social Development

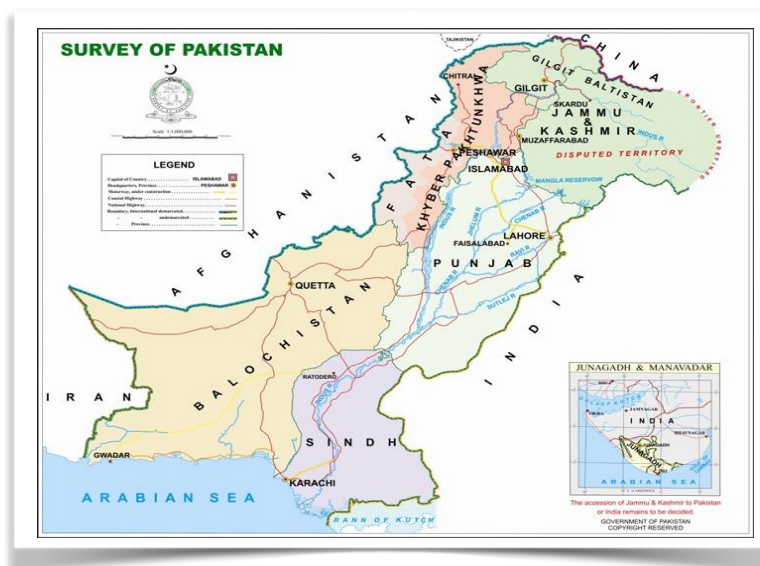
The Human Development Reports of 2013 and 2014 indicate that in 2005, 2009 and 2013, the Human Development Index (HDI) of Pakistan was 0.504, 0.572 and 0.537 respectively. The Inequality Adjusted Human Development Index for Pakistan in 2013 was 0.375. Data from the World Bank shows that the percentage of people with access to improved water sources for the years 2005 and 2009 was 90% and 91% respectively (World Bank, 2015b). However, the percentage of people with access to improved sanitation facilities was 42% in 2005 and 46% in 2009 (World Bank, 2015b), indicating that access to sanitation remains a serious challenge. Pakistan has a diverse range of energy sources, principally oil (29%), gas (44%), electricity (16%) and coal (10%). Energy supply has been increasing at an average of 4% per year.

Economy

Pakistan's economy has seen both spectacular and dismal times since 1947 with frequent changes in power corridors leading to inconsistent policy shifts. The country has witnessed boom and bust periods over the past few decades.

Pakistan experienced a decline in the Gross Domestic Product (GDP) growth rate from 9.0% in 2005 to only 2.8% in 2009 (World Bank, 2015c). However, positive development trends meant that the GDP growth rate rose to 3.7% in 2013 (Asian Development Bank, 2014).

The labor force participation rate (the percentage of total population ages 15-64) for the years 2005, 2009 and 2013 was 54, 55 and 56 respectively (World Bank, 2015). Different statistical sources provide varying measures of unemployment: the Asian Development Bank (2014) records unemployment at 7.7%, 5.4% and 6.2% in 2005, 2009 and 2013 respectively whereas the World Bank (2015), shows unemployment at 7%, 5% and 5% in 2005, 2006 and 2013 respectively (World Bank, 2015).



The service sectors contributed 56% to GDP in 2005, while agriculture contributed 23.0% and industry 20.6%. Important service sub-sectors were wholesale and retail trade with 19.7%, transport, storage and communication with 12.4%, and other private services contributing 8.1%.

Under agriculture, livestock with an input of 12.1%, crops with 9.9% stake and fishing with 0.6% were the most important sub-sectors. In the industrial sector, manufacturing (13.8%), mining and quarrying (3.3%) and construction (2.4%) were the most important (Government of Pakistan, 2013).

In 2009, the most important sector was that of service with 56.6%, with wholesale and retail trade (19.3%), transport, storage and communication (13.3%), and other private services (8.6%)

as the most important sub-sectors. The agricultural sector came second (22.5%) with livestock (11.8%), crops (9.7%) and fishing (0.6) as the most important sub-sectors. The third sector was industry (20.9%) with manufacturing (11.3%), mining and quarrying (3.2%) and construction (2.5%) as the important sub-sectors (Government of Pakistan, 2013).

In 2012, the service sector contributed 57.7% to GDP, while agriculture with 21.4% and industry with 20.9 % (Government of Pakistan, 2013). The three most important sub-sectors within the broader agricultural sector are crops (8.7%), livestock (11.9%) and forestry (0.4%). In the industrial sector, mining and quarrying (3.1%), manufacturing (13.2%) and construction (2.4%) are the most important sub-sectors. In the service sector, wholesale and retail trade (18.2%), transport, storage and communication (13.7%) and other private services (9.3%) are the most important sub-sectors.

Pakistan

Human Capital Index 2015 Rank

113

(out of 124 countries)

Key indicators

| | | | |
|---------------------------------------|---------|---|-------|
| Total population (1,000s) | 188,144 | Median age of population (years) | 22 |
| Working age population (1,000s) | 118,069 | GDP per capita (constant '11 US\$, PPP) | 4,746 |
| Tertiary-educated population (1,000s) | 5,428 | Labour force participation rate (%) | 54.4 |
| Aged dependency ratio (%) | 7.2 | Employment-to-population ratio (%) | 51.6 |
| Child dependency ratio (%) | 58.8 | Unemployment rate (%) | 5.1 |

Education and workforce distribution

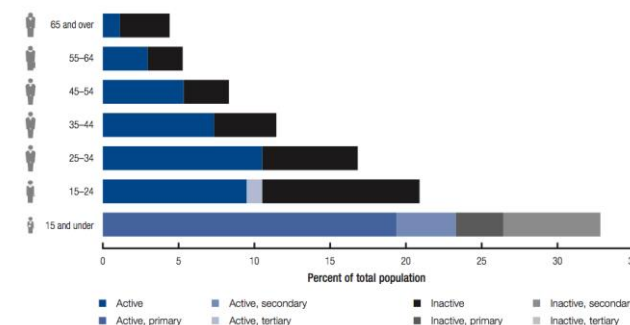


Figure 2: Human Capital Index – Pakistan, Source: UNDP

The three most important economic sectors are services, agriculture and industry. The principal challenge to the economic growth and development of Pakistan is the 'energy crisis' that started

in 2007 and worsened in 2012. The frequency of power outages and unreliability due to regular blackouts of between 8 to 10 hours (resulting from several causes including shortage of inputs and limited finance) has been increasing. The industrial sector, which is one of the main providers of employment and engine of economic growth, has been hit hard by persistent blackouts and power outages thereby hurting overall economic performance.

Other problems that have a negative effect on economic prospects include frequent flooding in the rainy season, insecurity emanating from external terrorist attacks and lawlessness in most parts of the country. These factors discourage both national and foreign investments.

Disaster Risk Management

Pakistan is a disaster prone country with exposure to earthquakes, floods, landslides, droughts and cyclones. Since 1947, almost 160,000 people have been killed mainly in earthquakes and floods. As per data from World Bank, Pakistan has faced an overwhelming loss of 28,295,969 USD since 1947 in different disasters, which excludes unreported and personal losses of individual citizens. Details are shown in Table 1 below.

Table 1: Casualties in Disasters

| Disaster type | Disaster subtype | Events count | Total deaths | Total affected | Total damage ('000 US\$) |
|----------------------------|-------------------|--------------|--------------|----------------|--------------------------|
| Drought | Drought | 1 | 143 | 2200000 | 247000 |
| Earthquake | Ground movement | 26 | 79445 | 6772571 | 5329755 |
| Epidemic | Bacterial disease | 3 | 142 | 11103 | 0 |
| Epidemic | Parasitic disease | 1 | 0 | 5000 | 0 |
| Epidemic | Viral disease | 1 | 10 | 12 | 0 |
| Extreme temperature | Cold wave | 3 | 18 | 0 | 0 |
| Extreme temperature | Heat wave | 14 | 2756 | 80574 | 18000 |
| Flood | -- | 37 | 4756 | 20965278 | 1170030 |
| Flood | Riverine flood | 43 | 9098 | 34963945 | 9725030 |
| Flood | Flash flood | 16 | 3071 | 22102792 | 10073118 |
| Landslide | Avalanche | 12 | 608 | 4322 | 0 |
| Landslide | Landslide | 10 | 222 | 29719 | 18000 |
| Storm | Convective storm | 9 | 196 | 1467 | 0 |
| Storm | Tropical cyclone | 6 | 11555 | 2589940 | 1715036 |
| Total Loss | | | | | 28,295,969 |

Five Year Plans of Pakistan

Pakistan initiated five years development plans in 1955, which continued till 2005, which had elements of technocratic and technical solutions to disasters. These 5-years plans focused on

responsiveness to floods with no or very little emphasis on mitigation or preparedness. Table 2 presents five year plans with relevant details about disaster related policies and events.

Table 2: Disaster Management Policies and Related Major Events

| Five Year Plans | Disaster Management policies in relation to major events in Pakistan's Development Plans |
|---|--|
| First 5-year plan 1955–1960 | The National Calamities Act 1958 passed as a result of river floods (not flash floods) in East Pakistan which remained focused on response and relief. |
| Second 5-year plan 1960–1965 | Increase in budget allocations for flood control measures. |
| Third 5-year plan 1965–1970 | This plan also had focus on river flooding control besides adding measures for enhancement of flood protection to increase cultivation areas. |
| Fourth 5-year plan 1970–1975 | A cyclone hits East Pakistan and an Emergency Relief Cell (ERC) is established at federal level. Floods hit Pakistan in 1973 and 1976. A world Bank funded project was abandoned because of political unrest. |
| No plan period 1971–1976 | The National Calamities Act 1958 is re-adopted as the West Pakistan Calamities Act, which remain limited to response and relief. |
| Fifth 5-year plan 1978–1983 | Flood control policy is further centralized with the establishment of the Federal Flood Commission in 1977. Role of provincial and district governments is further reduced in local hazard mitigation planning. |
| Sixth 5-year plan 1983–1988 | Technocratic tendencies hold with the extension of irrigation and drainage systems. |
| Seventh 5-year plan 1988–1993 | Structural measures such as building of additional storage capacity for floodwaters, and enhancing flood forecasting and flood warning system dominate the disaster policy horizon. |
| Eighth 5-year plan 1993–1998 | Focus on canal lining, remodeling and use of floodwater for land recharging. In addition, some non-structural measures such as promotion of water resources research in universities. |
| Ninth 5-year plan 1998–2003 | Flood control measures continued as in the previous plans. However, plan abandoned given extraordinary circumstances due to the events following 9/11 and Pakistan's new role in the 'war on terror'. |
| Medium Term Development Framework 2005– 2010 | Shift from flood- centered policy to a multi-hazard approach. UNDP Pakistan provided technical support and incorporated lessons learnt from the Boxing Day tsunami on December 26, 2004. <i>Poverty alleviation through control over natural hazards such as floods, droughts, and introduction of agriculture insurance against drought (Planning Commission of Pakistan, 2007, pp. 25-26).</i> |

Table 3: Disaster related federal ministries in the pre-2005 earthquake disaster management structure

| Ministry | Department | Brief history, roles and responsibilities in disaster management |
|-------------------------|--|--|
| Interior | Civil Defense Department | Established in 1951 at federal, provincial and district levels to ensure peace by preparing people in case of foreign country aggression. Since 1993, emergency preparation, first aid, response and relief for all kind of manmade and natural hazards are included. |
| | Emergency Relief Cell (ERC) | Established in 1971 at the federal level to deal with the emergency in the aftermath of the cyclone in East Pakistan. Its responsibilities include stockpiling goods and relief items and coordination with provincial relief departments. Operates an emergency room. |
| | National Crisis Management Cell (NCMC) | Established in July 1999 under the Anti-Terrorist Act at the federal and provincial levels to deal with any emergency resulting from human or natural hazards. |
| Water and Power | Water and Power Development Authority | Established in 1958, reservoir management and collection of rainfall data through its telemetric rain-gauge stations at different locations across the Indus River System. Also operates a seismic observatory at Tarbela dam since 1974. |
| | The Indus River Commission | Established in 1960 after signing of the Indus Waters Treaty, the Commission gathers data on river flow and rain fall in the catchment areas of Pakistan's western rivers flowing from India. |
| | Federal Flood Commission | Established in 1977 to have effective control of floods and to reduce flood losses. |
| | Dams and Barrages Safety Council | Established in 1987 to monitor dams' safety under federal and provincial governments and to coordinate with the Federal Flood Commission on large dams. |
| Defense | Frontier Works Organization | Established during the construction of Karakoram Highway 1966–1978. Run by the Pakistan Army, it has state-of-the-art logistic capability to unblock roads and remove landslides. |
| | Armed Forces | Pakistan Army, Air Force and Navy play leading roles in response, relief and evacuation. |
| | Pakistan Meteorological Department | A key institution that collects and analyses rainfall data and shares information relating to weather and geophysical phenomena with objectives of traffic safety in air, land and sea. |
| | Flood Forecasting Division | Meant to collect, analyze and prepare a flood forecast and warning, as necessary. |
| Cabinet Division | Planning Commission of Pakistan | Established in 1958 for strategic planning and preparation of federal development plans with regular intervals. |
| | Space and Under Atmosphere Research Centre | Established in 1981 as a commission at the federal level. It conducts studies and projects on satellite remote sensing for hazard mapping, resource surveying and environmental monitoring to obtain information about impending disasters |

As evident from Tables 2 and 3 above, the focus of disaster management remained mainly on response in the aftermath of any disaster. It was after the devastating earthquake of 2005, which triggered the need for preparedness and mitigation at the equal importance scale as of response and recovery. The establishment of Earthquake Reconstruction and Rehabilitation Authority (ERRA) and National Disaster Management Authority was a positive step to invest further in risk reduction mechanisms. There is still a huge gap to deal with climate change related disasters and their impact on livelihoods.

Globally in all the climate change concerns, drought ranks at the top position. It would have serious implications on Pakistan as an agrarian economy.

Drought Tops Climate Change Concerns across All Regions

Regional medians of most concerning effects of global climate change

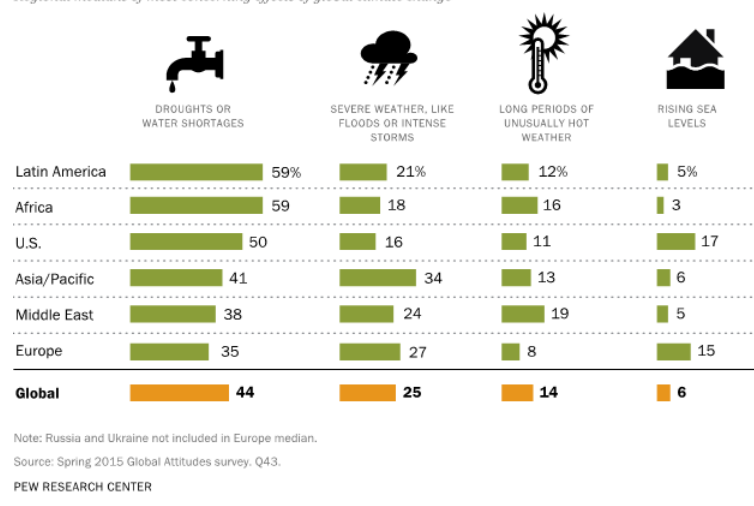


Figure 3: Drought Tops Climate Change Concerns across All Regions

In January 2015, five districts⁶ had been selected by project stakeholders through a participatory process, as study areas for the piloting of the programme. The prime factors for the selection of these districts were selected by the stakeholders in light of two factors:

- c) The frequency and intensity with which the selected districts experienced climatic stressors, and
- d) Ease of access to communities, security concerns

The five districts selected are: Charsadda, Poonch, Ziarat, Tharparkar, Rawalpindi; a brief discussion of the characteristics of the study areas follows in the section below.

Rawalpindi is one of the main cities of Pakistan which is highly populated with wide scale construction in and around the city. It has an area of 5,286 km² and is situated on the southern slopes of the north-western boundaries of the Himalayas in Punjab province. The population is estimated to be 4.5 million, in 2010. For the Demand Assessment, the area selected around Nullah Lai is a rain water fed natural stream flowing through the city of Rawalpindi. Nullah Lai is six tributaries, three from Islamabad and rest from Rawalpindi itself. Eleven drains from Rawalpindi also flow into Nullah Lai.

Tharparkar is mostly desert over an area of 19,638 km² with a population of 1.3 million in Sindh province. Mithi is the headquarters of Tharparkar district. It has lowest human development indicators among all districts of Sindh province. Tharparkar is mostly barren with sand dunes and thorny bushes. Occasional rains help some little vegetation in area. There are no regular water supply schemes in Tharparkar and water scarcity is the top most issue faced by locals. The Thar Region forms part of the bigger desert of the same name that sprawl over a vast area of Pakistan and India from Cholistan to Nagarparkar in Pakistan and from the south of the Haryana down to Rajasthan in India.

Charsadda has an area of 996 km² with a population of 1.6 million, in Khyber Paktunkhwa province. Charsadda consists of two main geographical parts: Hashtnagar and Do Aaba. There are three rivers flowing in Charsadda: the River Jindi, the Kabul River and the Swat River; these are the main source of irrigation for Charsadda. The three rivers then merge and join the Indus River.

Ziarat is a small city of Balochistan with an area of 3.62 km² and a population of almost 100

⁶ For details of the district shortlisting and selection process, please refer to the 'Methodology, Technical Considerations, and Selection of Study Areas' document (February 2015)

thousand according to 2008 estimates. As compared to other districts of Balochistan, Ziarat has highest human development indicators. Tourism is one of main source of livelihood for the district. Climate is regarded as semi-arid in Ziarat.

Poonch is a small town covering an area of 855 km² with a population of 459,000 at the border of Indian occupied Kashmir. The headquarters of Poonch is Rawalakot. The district has comparatively decent human development indicators [38 out of 148 districts] despite low-income infrastructure and civic facilities.

3. Climate Change in Pakistan

Pakistan is one of the most vulnerable countries to be affected by climate change. It has a very small global greenhouse gas emission (less than 1%) but it is categorized as most vulnerable because of two main factors:

- Very low technical and financial capacity to adapt to adverse impacts of climate change
- Economic dependency on agriculture sector

Some of the important climate change threats to Pakistan are as follows⁷:

- Increase in the frequency and intensity of extreme weather events
- Out of season/irregular monsoon rains leading to flash floods and droughts
- Projected recession of the Hindu Kush-Karakoram-Himalayan (HKH) glaciers due to global warming and carbon soot deposits from trans-boundary pollution sources, threatening water inflows into the Indus River System (IRS)
- Siltation increased in major dams
- Rise in temperature resulting in enhanced heat and water stressed conditions
- Decrease in forest cover which is already one of the lowest in the world

⁷ National Climate Change Policy, 2012

<http://www.mocc.gov.pk/gop/index.php?q=aHR0cDovLzE5Mi4xNjguNzAuMTM2L21vY2xl3VzZXJmaWxlcz>

- Increased intrusion of saline water in the Indus delta, adversely affecting coastal agriculture, mangroves and the breeding grounds of fish
- Threat to coastal areas due to projected sea level rise and increased cyclonic activity due to higher sea surface temperatures
- Increased stress between upper riparian and lower riparian regions in relation to sharing of water resources;
- Increased health risks and climate change induced migration.

The above threats lead to major survival concerns for Pakistan, particularly in relation to the country's water security, food security and energy security.

Agriculture related Climate Change Issues

- Reduced water availability
- Decrease in wheat, rice, cotton and sugarcane production
- Livestock production predicted to decline by 20-30%
- Overstressed rangelands
- Reduction in forest cover
- Expected decrease in export of vegetables and fruits
- Malnutrition will further increase because of low agri-productivity
- Possibility of decline in foreign exchange as 70% of country's foreign exchange comes from agriculture sector

Impact of Climate Change on Livelihood in Pakistan

Agriculture is the most important sector of the economy, which encompasses almost 70% of the livelihood of the population of Pakistan. Agriculture sector employs 45% of the labour force, has almost 18% share in the exports of the country. Keeping in view the significant role of agriculture in the economy of Pakistan, the impact of climate change is of extreme prominence.

EvZmlsZS9Nb2NsYy9Qb2xpY3kvTmF0aW9uYWwvMjBDbGlYXRlJTlWQ2hhbmdlJTlWUG9saWN5JTlwb2YlMjBQYWtpc3RhbiUyMCGyKS5wZGY%3D

It is an undeniable fact that climate and weather conditions have great impact on agriculture. Temperatures are estimated to rise by 3 degrees by 2040 and 4-5 degree by end of the century. Rains especially monsoon have started becoming more unpredictable and intense. Droughts and floods are also predicted in the years to come. According to the 2009 report of the International Food Policy Research Institute "South Asia will be the most severely impacted by climate change. By 2050 it could lose 50% of its wheat productivity." Pakistan is ranked amongst the top 10 severely affected countries of the world, outside Africa as per the recent ranking of Maplecroft.

Pakistan's agriculture sector not only feeds the country but it supplies food products to Afghanistan, Middle East and some Central Asian countries. Mangoes and basmati rice are in high demand all over the world.

Agriculture is the lifeline of Pakistan's economy which is under severe threat from the adverse impacts of climate change. In the years to come, this threat may have direct impact on the livelihood of at least 100 million people in particular and on the economy of the country in general. Pakistan's population is also expected to increase to 240 million by 2035.

4. Financial Services and Behaviour in Pakistan

Pakistan is not a highly banked country as a large part of its economy is informal and unregulated. Even today, cash is the preferred mode of payment among Small and Medium-sized enterprises. According to the World Bank's statistics on financial inclusion, only 8.7% of adults in Pakistan have a bank account when compared with the South Asian average of 45.5%. In South Asia on average 18% people have debit cards, whereas this percentage is only 2.9% in Pakistan.

In Pakistan 3% of the people have a formal saving account whereas formal borrowing is done by only 2% of the population. The positive element comes from mobile banking, which is done by 5.8% population as compared to 2.6% of the population in South Asia.

Microinsurance in Pakistan is in its infancy stages. The largest microinsurance policies in Pakistan are offered through Benazir Income Support Programme (BISP). The rest of the half are offered by various microfinance institutions (FMIs), microfinance banks, nongovernment organizations, and rural support programmes (RSPs).

The most common microinsurance policies currently offered are:

- Health cover (hospitalization and deaths)

| Pakistan | | | |
|---|--------------|---------------------|---------------------|
| South Asia | | Lower middle income | |
| Population, age 15+ (millions) | | GNI per capita (\$) | |
| | | 120.5 | 1,360 |
| | Country data | South Asia | Lower middle income |
| Account (% age 15+) | | | |
| All adults | 13.0 | 46.4 | 42.7 |
| Women | 4.8 | 37.4 | 36.3 |
| Adults belonging to the poorest 40% | 11.2 | 38.1 | 33.2 |
| Young adults (% ages 15–24) | 13.2 | 36.7 | 34.7 |
| Adults living in rural areas | 12.4 | 43.5 | 40.0 |
| Financial Institution Account (% age 15+) | | | |
| All adults | 8.7 | 45.5 | 41.8 |
| All adults, 2011 | 10.3 | 32.3 | 28.7 |
| Mobile Account (% age 15+) | | | |
| All adults | 5.8 | 2.6 | 2.5 |
| Access to Financial Institution Account (% age 15+) | | | |
| Has debit card | 2.9 | 18.0 | 21.2 |
| Has debit card, 2011 | 2.9 | 7.2 | 10.1 |
| ATM is the main mode of withdrawal (% with an account) | .. | 31.1 | 42.4 |
| ATM is the main mode of withdrawal (% with an account), 2011 | 32.4 | 16.9 | 28.1 |
| Use of Account in the Past Year (% age 15+) | | | |
| Used an account to receive wages | 1.4 | 3.5 | 5.6 |
| Used an account to receive government transfers | 1.8 | 3.1 | 3.3 |
| Used a financial institution account to pay utility bills | 0.4 | 2.7 | 3.1 |
| Other Digital Payments in the Past Year (% age 15+) | | | |
| Used a debit card to make payments | 1.0 | 8.5 | 9.6 |
| Used a credit card to make payments | 0.1 | 2.6 | 2.8 |
| Used the Internet to pay bills or make purchases | 1.8 | 1.2 | 2.6 |
| Domestic Remittances in the Past Year (% age 15+) | | | |
| Sent remittances | 15.7 | 10.7 | 14.2 |
| Sent remittances via a financial institution (% senders) | 4.8 | 20.1 | 30.9 |
| Sent remittances via a mobile phone (% senders) | 5.7 | 7.7 | 7.7 |
| Sent remittances via a money transfer operator (% senders) | 12.5 | 13.7 | 18.3 |
| Received remittances | 24.8 | 12.2 | 17.8 |
| Received remittances via a financial institution (% recipients) | 4.6 | 15.8 | 26.0 |
| Received remittances via a mobile phone (% recipients) | 4.3 | 4.7 | 5.7 |
| Received remittances via a money transfer operator (% recipients) | 11.2 | 9.8 | 16.6 |
| Savings in the Past Year (% age 15+) | | | |
| Saved at a financial institution | 3.3 | 12.7 | 14.8 |
| Saved at a financial institution, 2011 | 1.4 | 11.1 | 11.1 |
| Saved using a savings club or person outside the family | 11.4 | 8.8 | 12.4 |
| Saved any money | 31.6 | 36.2 | 45.6 |
| Saved for old age | 5.0 | 9.1 | 12.6 |
| Saved for a farm or business | 12.3 | 7.3 | 11.8 |
| Saved for education or school fees | 10.8 | 14.6 | 20.0 |
| Credit in the Past Year (% age 15+) | | | |
| Borrowed from a financial institution | 1.5 | 6.4 | 7.5 |
| Borrowed from a financial institution, 2011 | 1.6 | 8.7 | 7.3 |
| Borrowed from family or friends | 34.0 | 31.4 | 33.1 |
| Borrowed from a private informal lender | 5.3 | 10.9 | 8.5 |
| Borrowed any money | 49.8 | 46.7 | 47.4 |
| Borrowed for a farm or business | 10.7 | 8.6 | 9.2 |
| Borrowed for education or school fees | 6.3 | 8.9 | 10.1 |
| Outstanding mortgage at a financial institution | 4.4 | 3.8 | 4.7 |

- Life insurance
- Crop insurance

There is a huge gap in the potential market and actual utilization of microinsurance in Pakistan. There is a need for comprehensive and sustained efforts to incorporate microinsurance at large scale among masses.

5. The Demand for Climate Risk Insurance in Pakistan

The Demand Assessment was implemented in the selected districts of Pakistan by a team of skilled enumerators using a comprehensive Demand Assessment instrument. The instrument builds upon international best practice, Pakistan's experiences with microinsurance, MCI's experience and expertise in designing and implementing weather index-based microinsurance solutions. In addition to being peer reviewed by international experts, the Demand Assessment benefits from:

- The Climate Risk Adaptation and Insurance in the Caribbean (instruments from 2011, 2013)
- The Benazir Income Support Programme's Poverty Scorecard
- The Pakistan Poverty Alleviation Fund's Livestock insurance survey
- Make references to the Govt of Pakistan's Household Survey, Pakistan Social and Living Standards Measurement survey, according to the needs and objectives of the task

In keeping with the three overarching goals of the Demand Assessment, 1,410 households were surveyed in communities located in the five districts. The Demand Assessment provided valuable insights to the profile of the target group – socioeconomic data, gender and literacy to

⁸Willingness-to-Pay, Ability-to-Pay surveys are undertaken from two main perspectives; to measure the benefits to a society arising from the provision of a good or service as part of a Cost Benefit Analysis (CBA) or to predict demand patterns as inputs to pricing and distribution decisions (Levy & Quigley 1993; Mills et al 1994; Donaldson et al 1995). These methodological tools facilitate the estimation of the capacity to pay of certain social groups in a search to find out the hypothetical monetary value for social protection programmes and in determining how to achieve adequate risk cover for individuals at an affordable price.

understand types of climate stressors they face and how these affect them. At the heart of the Demand Assessment instrument lie two economic tools, *Willingness-to-Pay*, *Ability-to-Pay*⁸ that are collectively used to forecast premium rates, future enrollment in the proposed climate risk insurance programme, as well as sustainability. The socioeconomic information coupled with the cost benefit analyses derived from the Demand Assessment, are inputs to the development of an insurance contract that addresses the needs of the vulnerable, low-income population.

Methodology

In September 2015, a demand study was conducted in five districts of Pakistan. The purpose of the Demand Assessment was to map out the demand for climate risk insurance and then design an insurance contract that would best serve the lowest of the low-income, and which would play a role in reducing their vulnerability to climatic stressors, managing climatic risk to their livelihoods, and over time enhancing social protection.

In order to get to know the potential customers, a rigorous Demand Assessment was conducted in 1,410 households in communities located in the five districts.

The Demand Assessment provided valuable insights to the profile of the target group – socioeconomic data, gender and literacy to understand types of climate stressors they face and how they affect them. At the heart of the Demand Assessment instrument lie two economic tools, *Willingness-to-Pay*, *Ability-to-Pay*⁹ that are collectively used to forecast premium rates, future enrollment in the proposed climate risk insurance programme, as well as sustainability.

The socioeconomic information coupled with the cost benefit analyses derived from the Demand Assessment, are inputs to the development of an insurance contract that addresses the needs of the vulnerable, low-income population.

The Demand Assessment instrument, sampling methodology, and other relevant details are included as technical annexes to the report.

⁹Willingness-to-Pay, Ability-to-Pay surveys are undertaken from two main perspectives; to measure the benefits to a society arising from the provision of a good or service as part of a Cost Benefit Analysis (CBA) or to predict demand patterns as inputs to pricing and distribution decisions (Lavy & Quigley 1993; Mills et al 1994; Donaldson et al 1995). These methodological tools facilitate the estimation of the capacity to pay of certain social groups in a search to find out the hypothetical monetary value for social protection programmes and in determining how to achieve adequate risk cover for individuals at an affordable price.

Study Areas

The study was carried out in five districts taken from Punjab, Sindh, Khyber Pakhtunkhwa (KP) and Balochistan provinces and Azad Jammu and Kashmir state. The cantonments and militarily restricted areas of these districts were out of scope of the study. Initially MCII and the DHI identified 11 districts that were most prone to climatic stressors and extreme weather events.

In a consultative workshop, stakeholders including representatives from NDMA, federal ministries and provincial departments as well as civil society organizations selected 5 study districts from the 11 that had been identified. The list of districts selected for the Demand Assessment is as follows:

Table 4: List of Districts

| Sr.No. | District | Province | Population |
|--------|------------|-------------|------------|
| 1 | Poonch | Kashmir | 573,000 |
| 2 | Charsadda | KP | 1,359,000 |
| 3 | Ziarat | Balochistan | 45,000 |
| 4 | Tharparkar | Sindh | 1,177,000 |
| 5 | Rawalpindi | Punjab | 4,538,000 |

Sampling Frame

The Demand Assessment team used multistage sampling technique with systematic random sampling. The Demand Assessment methodology is appended as Annex II.

Stage 1: Five districts were selected based on their susceptibility to extreme weather conditions.

Stage 2: The names of areas where the Demand Assessment must be conducted were given by the MCII.

Stage 3: The list of communities was prepared with detailed micro-plans of the Demand Assessment and supervisory teams, which is appended in Annex III.

Stage 4: After the random draw of wards and/or village, with proportion to size from each district, enumeration was carried out in selected areas using the right hand rule.

Sample Size and Allocation

Sample size was selected by using sample selection calculator, under the assumption as:

- Margin of error: 7.5%
- Level of confidence: 95%
- Response distribution: 50%

To include spatial design effect, the sample size was multiplied by an estimate of design effect. Design effect was set at 1.5. The sample size with design effect came out to be $171 \times 1.5 = 256.5$. Further adding 10% margin for errors and non-response, the final sample size was determined as $256.5 + 25.65 = 282$ per district.

Table 5: Sample Size

| District | Population | Sample with design effect | 10% for non-response/errors | Total case load |
|--------------------------------|------------|---------------------------|-----------------------------|-----------------|
| Rawalpindi | 4,538,000 | 256.5 | 25.65 | 282 |
| Charsadda | 1,359,000 | 256.5 | 25.65 | 282 |
| Tharparkar | 1,177,000 | 256.5 | 25.65 | 282 |
| Ziarat | 45,000 | 256.5 | 25.65 | 282 |
| Poonch | 573,000 | 256.5 | 25.65 | 282 |
| Total acceptable sample | | | | 1410 |

As is evident from the table above, the total sample size was decided to be 1,410. In the actual Demand Assessment in the field, 286 forms were received from Rawalpindi, 287 from Charsadda, 282 from Tharparkar, 272 from Ziarat and 285 from Poonch. This makes the total sample size 1,413. Three questionnaires were discarded for incomplete data.

Characteristics of Sample

The overall sample size decided for the purpose of this Demand Assessment was 1,410, and the actual data was collected from 1413 households. The overall male-female ratio of respondents is calculated to be 54% males and 46% females. The following table gives the district-wise distribution of sample:

Table 6: Sample Distribution across Districts

| District | Sample Size | Male Respondents (%) | Female Respondents (%) |
|--------------|-------------|----------------------|------------------------|
| Rawalpindi | 285 | 52.3 | 47.7 |
| Charsadda | 286 | 62.2 | 37.8 |
| Tharparkar | 282 | 42.2 | 57.8 |
| Ziarat | 275 | 64.4 | 35.6 |
| Poonch | 285 | 50.5 | 49.5 |
| Total | 1413 | | |

Training of Enumerators

Prior to initiation of the Demand Assessment, a two-day comprehensive training was conducted in Islamabad, which was attended by sixteen enumerators, five supervisors and five specialists. The training report is appended as Annex IV.

Data collection and verification

Enumerators were hired from the selected districts to ensure they are familiar with local dialect and culture. Efforts were made to recruit enumerators with extensive relevant experience. In

addition to supervisors, senior development consultants were engaged to monitor the whole process in all five districts.

Each questionnaire was allotted a unique reference number to track a questionnaire to its specific household. National identity card numbers were included to ensure authenticity of the data. Mobile numbers were also taken to validate the data in the monitoring process. A team of professional statisticians was engaged for data processing and administering.

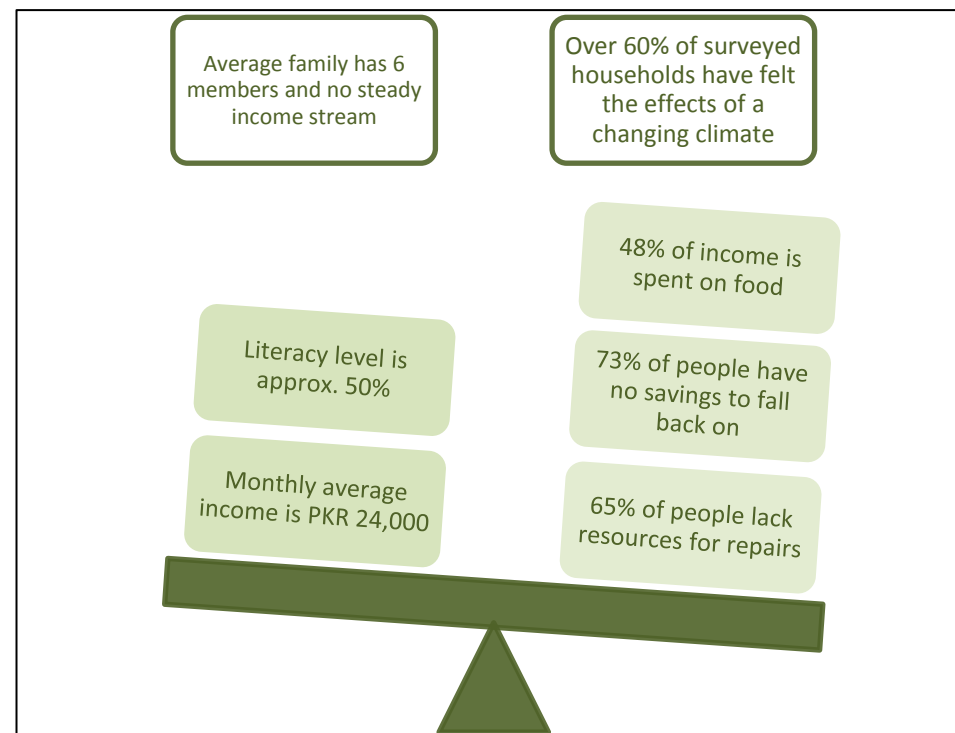


Figure 4: Profile of Household

Demand for Microinsurance in Pakistan: Results

This section deals with important findings based on data analysis conducted on the respondents' opinions about various aspects related with microinsurance. It captures awareness about

climatic changes, perceptions about insurance in general and information about microinsurance in particular. It also presents important findings about the demand for microinsurance based on Willingness-to-Buy and Ability-to-Pay for microinsurance. Further, some results about the household coping mechanisms in the face of different events, household level savings, loans, remittances, assets are also presented.

Average Household in Pakistan

In order to incorporate socioeconomic indicators into the paradigm of need assessment, household characteristics are mapped out which have outlined a typical profile of a vulnerable low income household. The following key dimensions have been considered to develop an average household profile:

- i. Literacy,
- ii. Household Characteristics including source of drinking water, construction material of walls, and roof, type of latrine, and overall condition of house.
- iii. Type of adjustment,
- iv. Prevalence of insurance,
- v. Perception about insurance,
- vi. Willingness to buy microinsurance and ability to pay for premium,
- vii. Saving account,
- viii. Purpose of saving,
- ix. Monthly expenditures.

Detailed data is appended in Annex VII.

District-wise data analysis proved that there were variations across districts along these dimensions. Therefore it is difficult to depict one representative profile. The following table carries information across districts along these dimensions.

Table 7: Average Household Characteristics

*- Based on the respondents who showed willingness to buy microinsurance.

| Dimensions | Rawalpindi | Charsadda | Tharparkar | Ziarat | Poonch |
|--|---|---|--|---|--|
| Literacy | 50.2% | 34.6% | 29.8% | 60.8% | 74.7% |
| Household Characteristics | | | | | |
| Main source of drinking water | Piped Water Filtration Plant | Piped Water Hand Pump Motorized Pumping | Open Well Hand Pump | tanker/truck/vendor, Motorized Pumping | River/Lake/Pound/Stream, Piped Water |
| Main construction material of the walls | Brick/Cement | Brick/Cement, Mud built | Sheet/Wood Mud built | Brick/Cement, Block and steel | Brick/Cement, Block and steel |
| Main construction material of the roof | Cement | Cement Tile/Wood | Sheet/Wood, Hay/Bamboo | Tin, Cement | Cement, Tin |
| Type of latrine | Flush connected to public sewerage | Flush connected to pit | No toilet in the household, Flush connected to pit | Flush connected to pit, Flush connected to open drain | Flush connected to open drain, Flush connected to pit |
| Overall condition of the house | Partial renovation required, Good | Partial renovation required | Partial renovation required | Partial renovation required | Partial renovation required |
| Prevalence of insurance | 3.9% | 0.4% | 0.7% | 0% | 10.9% |
| Reasons of no insurance | do not know enough about it | do not know enough about it | do not know enough about it | do not know enough about it | too expensive, Religious reasons |
| Willingness to buy microinsurance* | 11% | 11% | 56% | 41% | 42% |
| Ability to pay for premium* | Up to Rs. 1000 | Between Rs. 1001- 2000 | Up to Rs. 1000 | More than 5000 | Between Rs 1001-2000 |
| Saving account of any HH member | 16% | 0.4% | 5.3% | 35% | 8.4% |
| Main purpose of saving | Health care | Health care | To respond to emergencies | Health care | To respond to emergencies |
| Monthly expenditures in PKR (average) | 28,213 | 20,012 | 12,171 | 32,221 | 30,405 |

Hence, it can be seen that the profile of a vulnerable household varies across districts. The only common dimension appears to be the condition of the household i.e. 'requires renovation'. The other commonality can be the main purpose of saving which includes health care, and to respond to emergencies.

Table 8: Household related characteristics

| District | Household size | Average number of rooms per household | Average number of persons per room |
|------------|----------------|---------------------------------------|------------------------------------|
| Rawalpindi | 6.36 | 2.39 | 3.28 |
| Charsadda | 6.21 | 1.92 | 3.79 |
| Tharparkar | 5.87 | 2.82 | 3.80 |
| Ziarat | 5.36 | 2.45 | 2.41 |
| Poonch | 6.19 | 3.00 | 2.41 |
| Overall | 6.00 | 2.52 | 3.14 |

The average number of rooms per household varied from around 2 in Charsadda to 3 in Poonch, and the average number of persons per room varied from 2.4 in Poonch and Ziarat to 3.8 in Tharpakar.

The overall **literacy rate in households**, for age 10 and above, came up to be about 55%, where around 63% of the male and 45% of the female members of the household were literate. District-wise distribution of literacy rates are given in the table above.

The main source of **drinking water** for households varied a lot across districts. In district Rawalpindi, Piped Water was the main source of drinking water for about 54% of the households, while in Charsadda around 40% household used 'hand pumps'. In Tharparkar the most mentioned source was 'open well' by 37% respondents, in Ziarat it was tanker /truck/vendor (58%), and in Poonch it was lake/streams for around 62% respondents.

Some other important housing characteristics were also explored which included separate kitchen, electricity connection, construction material used in home, provision of latrine, main fuel for cooking, overall condition of household and money spent on repair/improvement.

Overall results, through varied across districts, showed that almost 71% households had separate kitchens, about 88% had electricity connection, around 61% used fire wood, and another 39% used gas as fuel for cooking. Further, cement/brick material was used as main material for construction of walls in around 56% houses, while mud was used for another 22%. The overall condition of household was considered to be good in the opinion of 29% respondents while 45% considered that their homes required partial renovation. Around 20% of the households reported that they spent money for repair/improvement of their houses in the last 12 months and this ratio was highest in Tharparkar (36%) and lowest in Rawalpindi (9%).

The following figures and table give a detailed picture:

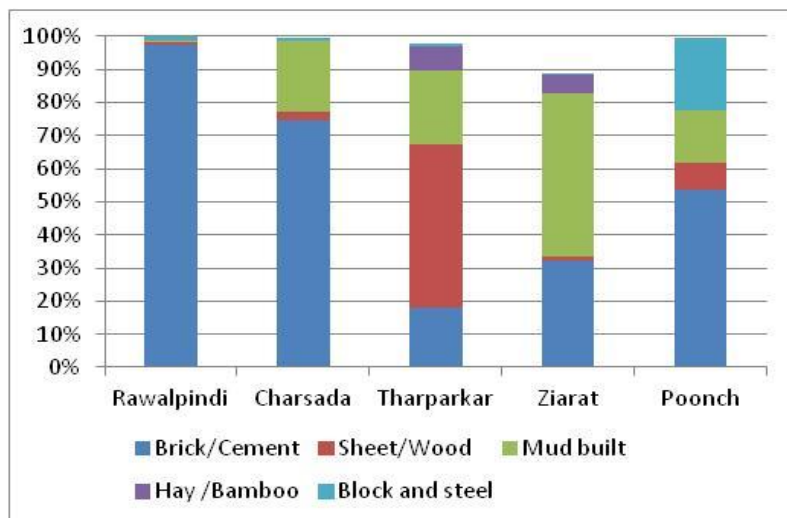


Figure 5: Household Characteristics: Main construction material of the walls (in %)

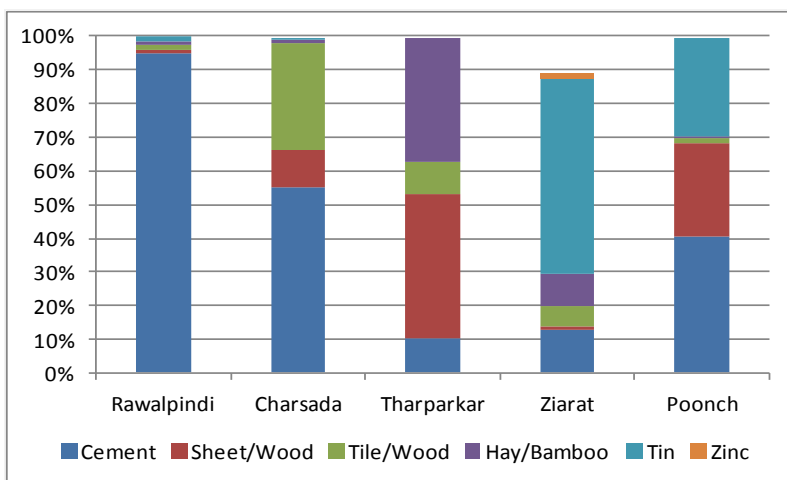


Figure 6: Household Characteristics: Main construction material of the roof (in %)

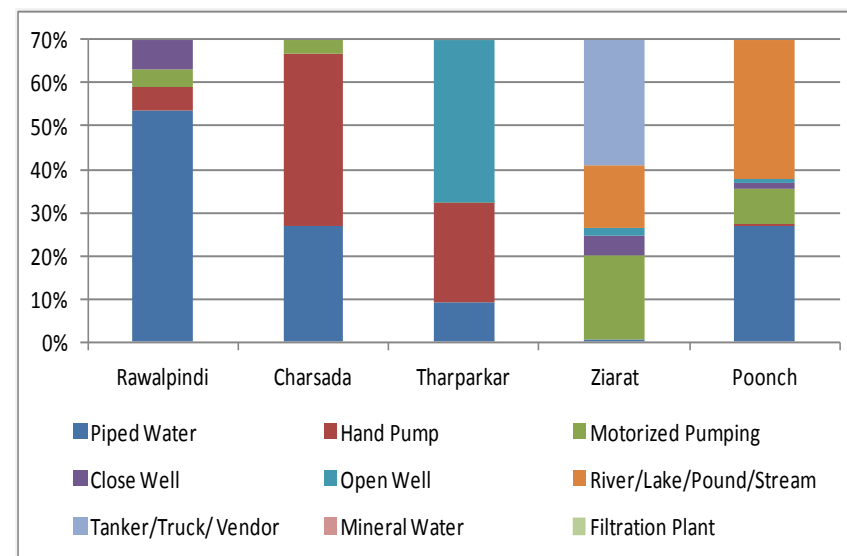


Figure 7: House hold Characteristics: The main source of drinking water (in %)

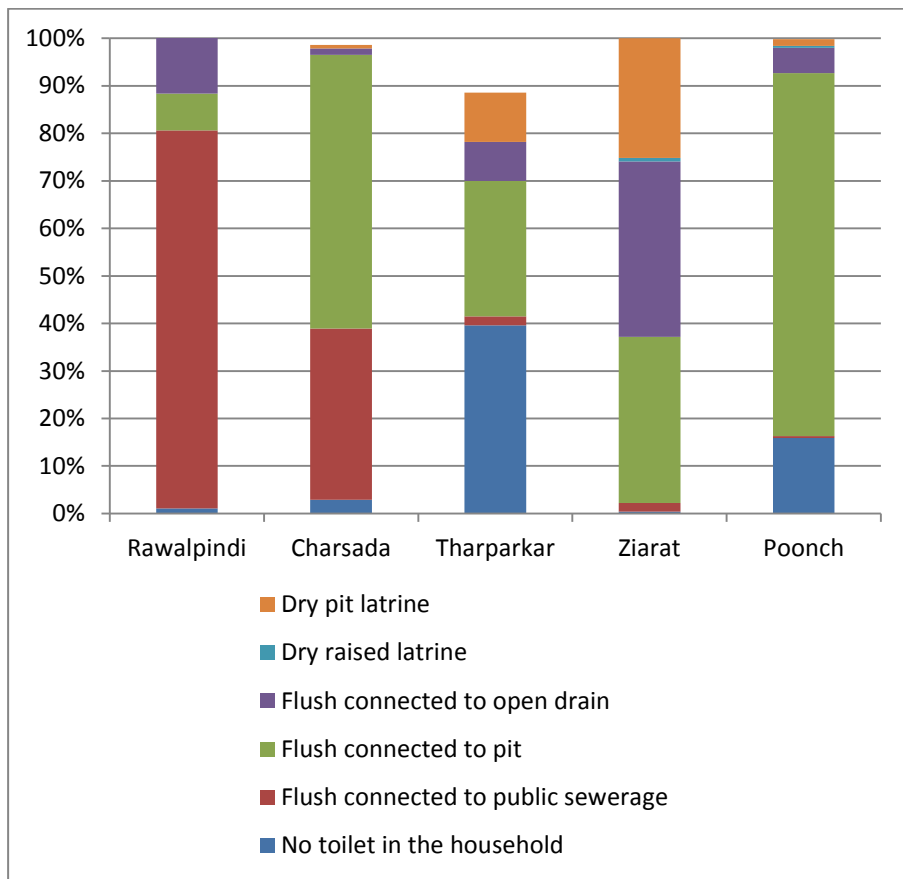


Figure 8: Household Characteristics: Type of latrine used in household (in %)

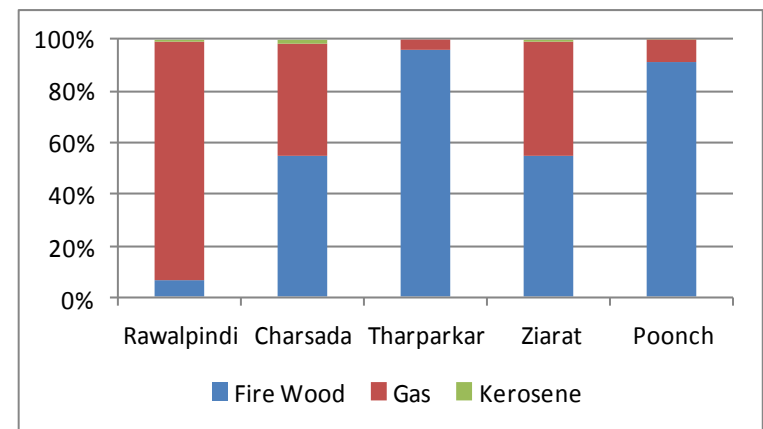


Figure 9: Household Characteristics: Main fuel used for cooking (in %)

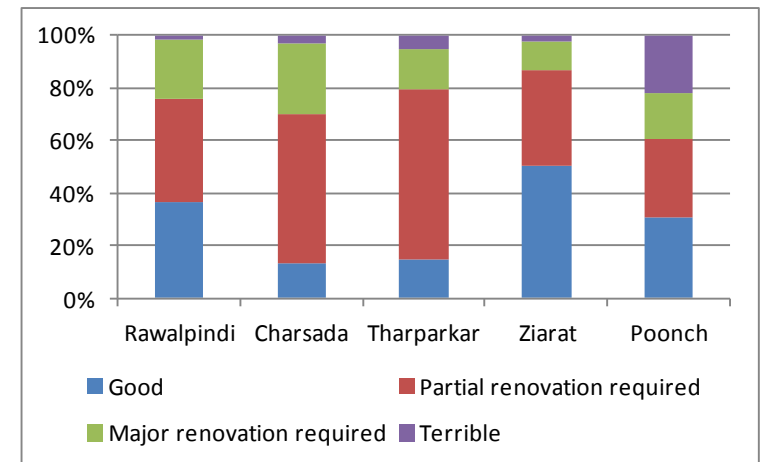


Figure 10: Household Characteristics: Overall condition of the house (in % of household)

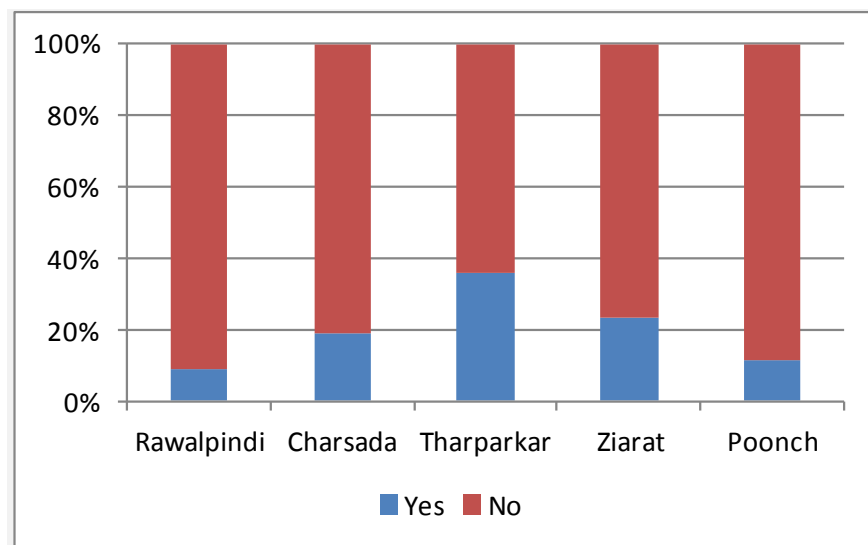


Figure 11: Household Characteristics: Money spent in the last 12 months to improve or repair the household (in % of household)

Table 9: Household Characteristics: Amount of money spent on the repair/improvement (average amount)

| How much money did you spend on the repair improvement? (Average amount) | | | | | | |
|--|------------|-----------|------------|--------|---------|--------------|
| District | Rawalpindi | Charsadda | Tharparkar | Ziarat | Poonch | Overall Avg. |
| Mean | 95,800 | 94,815 | 12,348 | 79,039 | 221,464 | 76,278 |
| N | 25 | 54 | 101 | 64 | 33 | 277 |

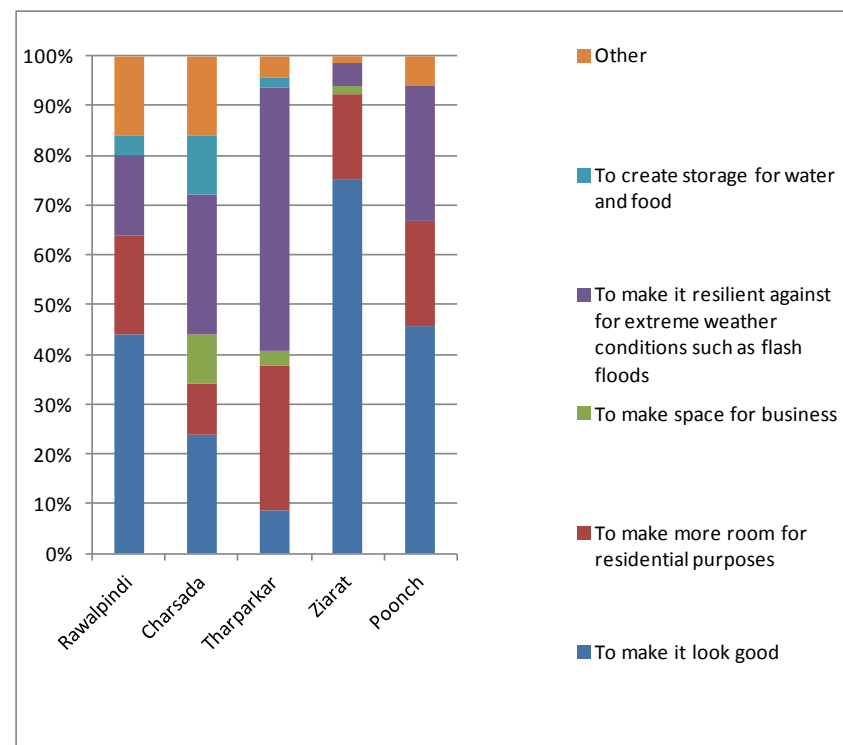


Figure 12: Household Characteristics: Reason for repair or improvement (in % of household)

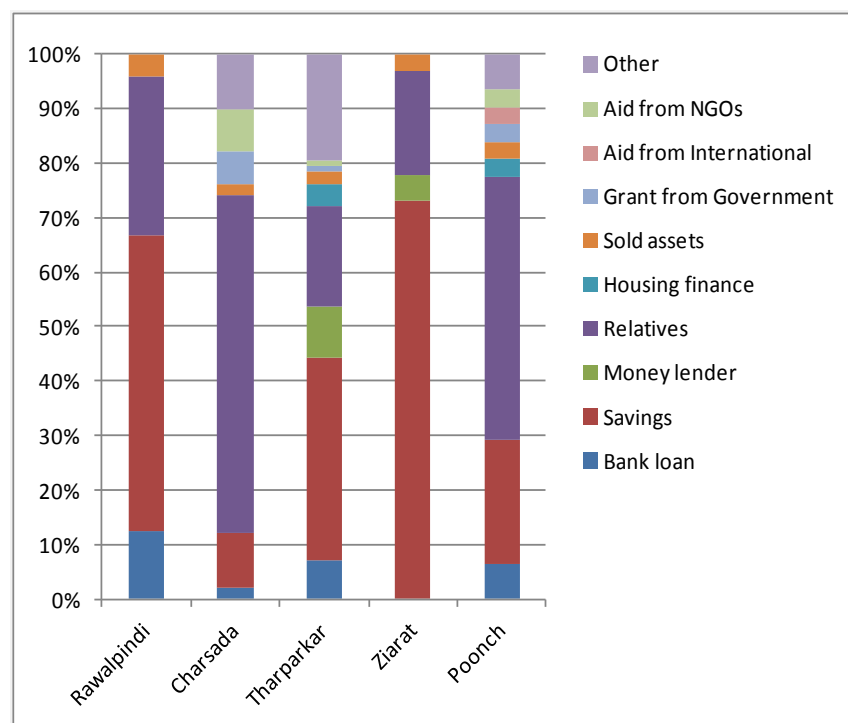


Figure 13: Household Characteristics: Source of money for the repair or improvement (in %)

Hence, it can be seen that household characteristics vary across districts. Further, most of the households belong to relatively lower-income segments that are vulnerable and are exposed to climatic risks.

Awareness about Climate Change

In order to assess the awareness of local community about climatic changes, the following three dimensions were explored on the bases of respondents' opinions:

- Changes in average temperature,
- Changes in the speed of rainfall, and
- Availability of water resulting in drought.

As far as the awareness about **change in average temperature** is concerned, overall responses from a majority of respondents (i.e. 88% out of 1,400) were found to be concentrated on the side of 'it has increased'. Across districts this percentage of respondents ranged from around 94% in Districts Tharparkar and Rawalpindi to about 77% in Poonch. The following table presents the snapshot.

Table 10: Awareness about changes in average temperature

| District | Awareness about long-term changes in average temperature | | | | | Total (in number) |
|--------------------------|--|---------------|----------------------|-----|----------|-------------------|
| | It increased | has decreased | It has been the same | has | been the | |
| Rawalpindi | 94.0% | 3.2% | 2.8% | | | 284 |
| Charsadda | 81.0% | 14.7% | 4.3% | | | 279 |
| Tharparkar | 94.3% | 5.0% | 0.7% | | | 280 |
| Ziarat | 91.2% | 3.3% | 5.5% | | | 272 |
| Poonch | 77.2% | 14.7% | 8.1% | | | 285 |
| Total (in number) | 1,225 | 115 | 60 | | | 1,400 |

The awareness about **speed of rainfall** is another important dimension of climatic changes. Results from data analysis show that in two districts i.e. Poonch and Charsadda, most of the respondents opined that 'speed of rainfall has increased' resulting in flashfloods (around 93% respondents in Poonch and 62% in Charsadda).

So, the flashfloods related microinsurance would be more relevant for Poonch and Charsadda districts. As a matter of fact, these two districts, among others, faced severe floods in 2010. On the other hand, in three districts i.e. Tharpakar, Ziarat, and Rawalpindi – most of the respondents shared their opinion that speed of rainfall had decreased.

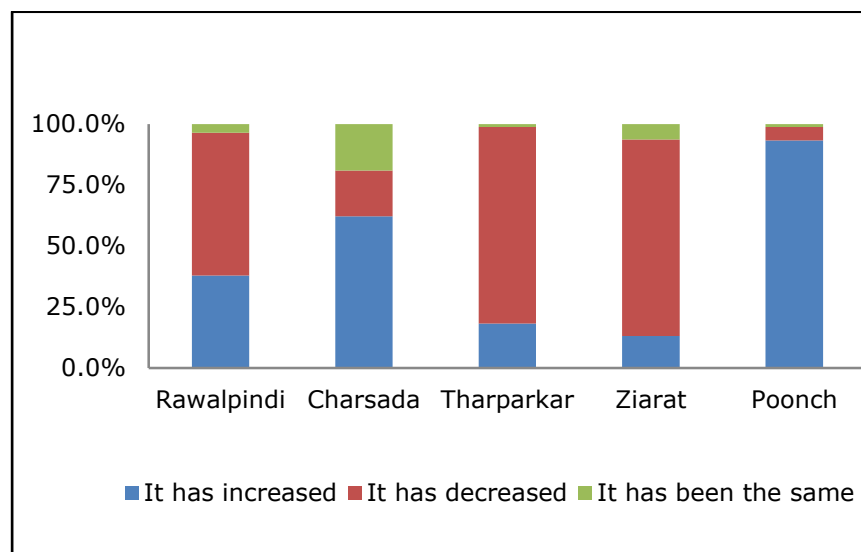


Figure 14: Awareness about speed of rainfall

In response to the question related with the awareness about the **availability of water**, overall in all districts together, most of the respondents (about 61%) opined that it has decreased, while according to 23% of respondents it was the same, and in the opinions of almost 16% of respondents it increased. Within districts, a relatively higher ratio of respondents opining that the availability of water has decreased was found, such as:

- Tharparkar – about 81%,
- Ziarat – about 77%,
- Poonch – about 74%,
- Rawalpindi – about 54%, and
- Charsadda – about 24%

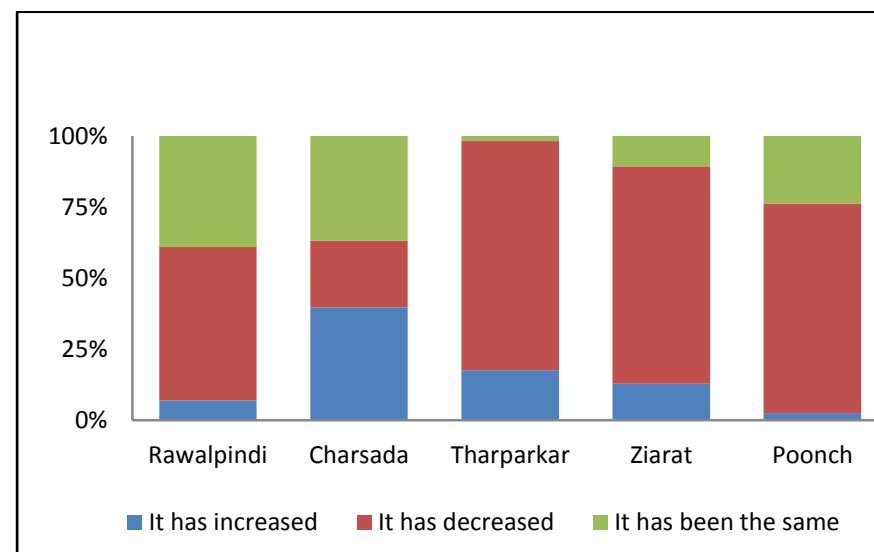


Figure 15: Awareness about long-term availability of water

It can be seen that respondents of some particular districts have reported low water availability. Therefore, in the light of the respondents' opinions it might be concluded that drought related microinsurance policies would be relatively more appropriate for the districts of Tharparkar, Ziarat, and Poonch and also to some extent in Rawalpindi.

The *gender based data analysis* revealed that around 84% and around 92% of the male respondents showed the perception of a rise in average temperature. Regarding any long-term changes in speed of rainfall and the average availability of water resulting in drought, the following tables show that the answers of male and female respondents are also quite similar.

Table 11: Changes in Weather Conditions

| Have you noticed any long-term changes in average temperature over the last 20 years? | | | | |
|---|-----------------------|-----------------------|--------------------------|-----------|
| Gender | Yes, it has increased | Yes, it has decreased | No, it has been the same | Total (%) |
| Female | 84.1% | 10.5% | 5.4% | 100% |
| Male | 91.6% | 5.5% | 3.0% | 100% |
| Total | 87.5% | 8.2% | 4.3% | 100% |

| Have you noticed any long-term changes in speed of rainfall resulting in floods over the last 20 years? | | | | |
|---|-----------------------|-----------------------|--------------------------|-----------|
| Gender | Yes, it has increased | Yes, it has decreased | No, it has been the same | Total (%) |
| Female | 47.1% | 47.8% | 5.1% | 100% |
| Male | 43.4% | 49.1% | 7.5% | 100% |
| Total | 45.4% | 48.4% | 6.2% | 100% |

| Have you noticed any long-term changes in average availability of water resulting in drought over the last 20 years? | | | | |
|--|-----------------------|-----------------------|--------------------------|-------|
| Gender | Yes, it has increased | Yes, it has decreased | No, it has been the same | Total |
| Female | 15.5% | 58.2% | 26.3% | 100% |
| Male | 16.5% | 65.4% | 18.1% | 100% |
| Total | 16.0% | 61.5% | 22.6% | 100% |

In response to a related question – whether the respondent attended any training or orientation about climate change or weather conditions – most of the respondents opined that they did not receive any such training or orientation. The results are presented in the table on the right:

Table 12: Training or orientation session about climate change or weather conditions

| District | Have you attended any training or orientation session about climate change or weather conditions | | |
|-------------------|--|-------|-------------------|
| | Yes | No | Total (in number) |
| Rawalpindi | 0.4% | 99.7% | 284 |
| Charsadda | 0.7% | 99.3% | 286 |
| Tharparkar | 1.4% | 98.6% | 280 |
| Ziarat | 0.4% | 99.6% | 272 |
| Poonch | 0.4% | 99.7% | 285 |
| Total (in number) | 9 | 1,398 | 1,407 |

As a very thin proportion of respondents have affirmed that they received/attended any training or orientation about climate change, there might be a need to disseminate information about climatic changes generally and customize the content to climatic facts of particular localities.

Climate Change and Type of Adjustments Made by Vulnerable Communities

This section deals with the types of adjustments undertaken by the households in response to changing climatic conditions.

Households may adjust to the changes in climatic conditions. In order to discover any pattern, a two-step analysis was conducted. In first step, the district-wise adjustments (top 5) were identified, and in the second step, through data exploration, adjustments were identified by the kind of extreme weather conditions in the light of respondents' opinions. The results of these two-steps are presented in the following tables for all three dimensions of climatic change.

In the face of *rise in average temperature*, as it can be seen from the above table, tree plantation has been the most frequent adjustment made by households in two districts i.e. Rawalpindi, and Charsadda. Moreover, building of water harvesting scheme was opined to be the major adjustment in case of Tharparkar district. In Ziarat district two most dominant adjustments, reported by respondents, were the strengthening of house and the plantation of trees. These findings signify that the adjustments are not homogenous across districts, and it might be attributed to different climatic conditions and challenges faced in the locality.

The major adjustments as proposed by the respondents in the *case of rainfall* were suggested to be the strengthening of house in the five surveyed districts. It is found to be the dominant response across districts. Other responses to weather changes include tree plantation, migration or temporary shifting to shelters/safer places, keeping emergency supplies and change crop variety. Reduction in livestock was also one of the coping adjustments.

These responses from households in Poonch and Charsadda are commensurate with the observations of the respondents to an earlier question regarding changing rain patterns where they had opined that speed of rainfall had increased over the years.

Flash Flooding has emerged as a major challenge in various districts of Pakistan, especially in recent years. The respondents in surveyed districts were asked about major adjustments that they made in the face of flash floods

Table 13: Major adjustments made in household for average temperature

| District | 5 Major adjustments made by respondents (percentage responses) | | | | |
|--|--|---|--|---|--|
| | 1 st major adjustment | 2 nd major adjustment | 3 rd major adjustment | 4 th major adjustment | 5 th major adjustment |
| Rawalpindi | Plant trees for shading and protection 22.5% | Build a greenhouse 1.4% | Strengthen house 1.4% | Take extra employment 0.7% | Change job 0.4% |
| Charsadda | Plant trees for shading and protection 43.0% | Migrate 14.0% | Move to secure shelter in a disaster 5.9% | Strengthen house 5.6% | Keep emergency food supplies 3.8% |
| Tharparkar | Build a water harvesting scheme 27.0% | Strengthen house 13.5% | Reduce number of livestock 7.1% | Migrate 6.0% | Take extra employment 5.7% |
| Ziarat | Strengthen house 45.8% | Plant trees for shading and protection 45.1% | Migrate 16.4% | Move to secure shelter in a disaster 16.0% | Change crop variety 8.7% |
| Poonch | Strengthen house 12.6% | Reduce number of livestock 1.4% | Plant trees for shading and protection 1.4% | Change from crop to livestock 1.1% | Implement soil conservation techniques 0.7% |
| Note: This is a multiple-response question, so total may exceed 100%. | | | | | |

Table 14: Major adjustments made in household for average rainfall

| 5 Major adjustments made (in percentage) | | | | | |
|--|----------------------------------|--|----------------------------------|----------------------------------|--------------------------------------|
| District | 1 st major adjustment | 2 nd major adjustment | 3 rd major adjustment | 4 th major adjustment | 5 th major adjustment |
| Rawalpindi | Strengthen house | Keep emergency food supplies | Take extra employment | Change job | Move to secure shelter in a disaster |
| | 18.9% | 8.1% | 4.9% | 2.8% | 1.8% |
| Charsadda | Strengthen house | Move to secure shelter in a disaster | Keep emergency food supplies | Migrate | River/water/drainage management |
| | 46.2% | 32.9% | 27.3% | 25.5% | 15.4% |
| Tharparkar | Strengthen house | Reduce number of livestock | Migrate | Build a water harvesting scheme | Evacuate livestock |
| | 50.4% | 5.3% | 3.2% | 3.2% | 1.4% |
| Ziarat | Strengthen house | Move to secure shelter in a disaster | Keep emergency food supplies | Reduce number of livestock | Migrate |
| | 56.4% | 47.6% | 31.3% | 16.4% | 14.9% |
| Poonch | Strengthen house | Implement soil conservation techniques | Change from crop to livestock | Change job | Reduce number of livestock |
| | 27.4% | 8.8% | 3.2% | 3.2% | 2.8% |

Note: This is a multiple-response question, so total may exceed 100%.



Table 15: Major adjustments made in household for flash floods

| District | 5 Major adjustments made (in percentage) | | | | |
|------------|--|--|--|--|--|
| | 1 st major adjustment | 2 nd major adjustment | 3 rd major adjustment | 4 th major adjustment | 5 th major adjustment |
| Rawalpindi | Keep emergency food supplies | Strengthen house | Move to secure shelter in a disaster | Plant trees for shading and protection | Implement soil conservation techniques |
| | 29.8% | 23.9% | 22.5% | 9.5% | 4.9% |
| Charsadda | Move to shelter in a disaster | Strengthen house | Keep emergency food supplies | Migrate | River/water/ drainage management |
| | 88.8% | 85.3% | 56.6% | 40.6% | 15.0% |
| Tharpakar | Strengthen house | Reduce number of livestock | Migrate | Irrigate more (or less) | Plant trees for shading and protection |
| | 4.6% | 4.3% | 1.1% | 0.7% | 0.4% |
| Ziarat | Move to secure shelter in a disaster | Strengthen house | Implement soil conservation techniques | Migrate | Keep emergency food supplies |
| | 7.6% | 6.9% | 6.9% | 1.8% | 1.1% |
| Poonch | Strengthen house | Implement soil conservation techniques | | | |
| | 0.7% | 0.4% | | | |

Note: This is a multiple-response question, so total may exceed 100%.

In Charsadda, a majority of respondents stated they must either move to secure shelter, strengthen the house, and/or keep emergency food supplies in order to survive. In Rawalpindi, the major adjustments came out to be 'keep emergency food supplies', strengthen house, and/or move to a secure shelter. In the remaining three districts i.e. Tharpakar, Ziarat, and Poonch – flash floods did not appear to cause any major adjustments.

As the households face different climatic conditions and they try to adjust themselves, they are likely to face constraints or difficulties. The following table gives a snapshot of responses related with such constraints/difficulties.



Table 16: Main constraints/difficulties in adjustments

| District | Main constraints/difficulties in adjustments (in percentage) | | | | |
|---------------------------|--|---------------|---------------------|--------------------|--------|
| | Not specified | Lack of money | Lack of information | Shortage of labour | Others |
| Rawalpindi | 23.5% | 69.7% | 6.8% | 0.0% | 0.0% |
| Charsadda | 5.7% | 79.9% | 14.3% | 0.0% | 0.0% |
| Tharparkar | 6.2% | 72.4% | 19.3% | 0.7% | 1.5% |
| Ziarat | 21.0% | 75.7% | 3.3% | 0.0% | 0.0% |
| Poonch | 70.5% | 28.8% | 0.4% | 0.4% | 0.0% |
| Total (in Numbers) | 350 | 893 | 121 | 3 | 4 |

In response to the question related with constraints/difficulties, overall the respondents in four districts except Poonch opined that lack of money was the main constraint in the adjustment process. In Charsadda, this ratio was the highest as almost 80% and 76% in Ziarat, and 70% in Rawalpindi of the respondents believed that lack of money was the main difficulty in the adjustment process. In Tharparkar and Charsadda, lack of information was reported to be the second main constraint (by 19% and 14% respondents respectively). In the case of Poonch district, a wide majority of respondents (around 71%) did not report any major constraint/difficulty in the adjustment process, but those who faced constraints cited lack of money as major constraint (21%).

The difficulties can be linked with the types of adjustments reported by respondents. As a matter of fact, those adjustments which require monetary expenditures expose the local people to monetary constraints/difficulties. Strengthening of house, moving to safer place/shelter and keeping emergency supplies require monetary endowments, which imply that there might be an association between these specific adjustments and the monetary constraints.

Sources of information about extreme weather conditions are found to vary across districts. In district Rawalpindi, the television was found to be the most dominant source, while in Tharparkar, neighbours were the most frequent source of such information followed by shopkeepers, family members, and colleagues.

However, in cases of Poonch, Charsadda, and Ziarat districts, television is found to be a relatively less frequent source of such information. For details please see the table in Annex-V.

Perceptions about Microinsurance

In this section, the following dimensions about microinsurance are explored:

- Prevalence of insurance (whether household has any insurance policy),
- The perception about insurance in general,
- Respondents' views about trust in insurance companies,
- Perception that microinsurance is for wealthy persons, and
- Perception that microinsurance is an unnecessary expense.

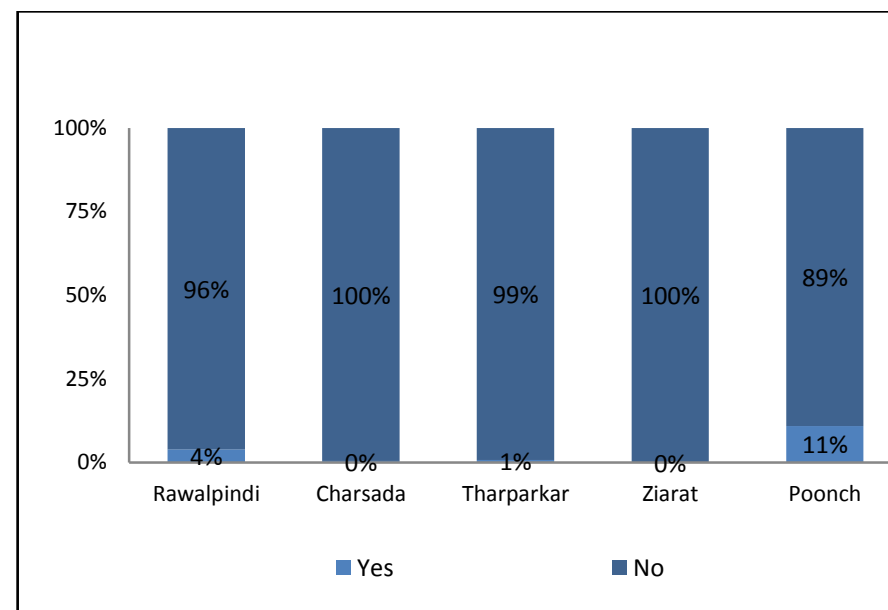


Figure 16: Households with insurance

The **prevalence of insurance** is found very low overall as only three percent (3%) of all the respondents i.e. 45 out of 1,413, reported that their household member(s) had any kind of insurance. The following table presents district-wise analysis:

Only in case of Poonch, around 11% of the respondents opined that their household had some kind of insurance. It implies that there is a wide room for introducing microinsurance in the surveyed localities/districts.

Next, some perception statements were asked in order to assess the general inclinations/ opinions of the respondents about insurance. Overall, a majority of respondents was unable to show their perception because they did not know about such dimensions.

Table 17: Level of agreement with perception statements about insurance

| | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|-----------------------------------|---|--|---|
| All Districts | | | |
| Strongly disagree | 3.8% | 3.1% | 4.2% |
| Disagree | 21.6% | 14.8% | 10.6% |
| Neither agree nor disagree | 6.0% | 9.7% | 9.6% |
| Agree | 24.3% | 15.2% | 21.7% |
| Strongly agree | 3.4% | 0.9% | 4.7% |
| Do not know | 41.0% | 56.3% | 49.4% |
| Total (actual numbers) | 1,405 | 1,401 | 1,398 |

In overall analysis, 41% of the respondents did not take any stance about the perception statement that ‘insurance is only for persons with a lot of money’. About 28% agreed with this perception, and 25% disagreed or strongly disagreed. In district Rawalpindi, out of 282 respondents around 34% agreed or strongly agreed with the statement **‘insurance is only for persons with lot of money’** while about 23% of the respondents strongly disagreed or disagreed with the statement. Other 27% did not know about it, and 16% neither agreed nor disagreed. It became evident that the prevalent perception among the respondents from Charsadda was that insurance is for people with a lot of money, while in Poonch there is lack of such perception. However, in other three districts any conclusive evidence could not be found for

such perception, as most of the respondents apparently did not know about microinsurance. The district-wise results are presented in Annex VI.

Further, in response to a perception statement **‘I have a high level of trust in insurance companies to pay out what was promised’**, the majority of the respondents did not take any position about the perception statement and only few respondents strongly agreed or disagreed (see table below). Please see Annex VI for district-wise results.

Table 18: Trust in insurance companies

| I have a high level of trust in insurance companies to pay out what was promised | | | | | | | |
|--|-------------------|----------|----------------------------|-------|----------------|-------------|-------|
| Gender | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Do not know | Total |
| Male | 3.8 | 17.6 | 8.2 | 16.1 | 0.9 | 53.4 | 100% |
| Female | 2.2 | 11.4 | 11.5 | 14.2 | 0.9 | 59.8 | 100% |
| Total | 3.1 | 14.8 | 9.7 | 15.2 | 0.9 | 56.3 | 100% |

| I believe that the insurance premiums are unnecessary expense of my household | | | | | | | |
|---|-------------------|----------|----------------------------|-------|----------------|-------------|-------|
| Gender | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree | Do not know | Total |
| Male | 5.7 | 11.7 | 7.4 | 24.0 | 4.9 | 46.3 | 100% |
| Female | 2.3 | 9.2 | 12.2 | 18.9 | 4.4 | 53.0 | 100% |
| Total | 4.2 | 10.6 | 9.6 | 21.7 | 4.7 | 49.4 | 100% |

In response to the statement **‘I believe that the insurance premiums are unnecessary expense of my household’**, overall analysis suggested that about half of the respondents did not show any stand about the perception. About 26% agreed with this perception, and 15% disagreed or strongly disagreed. In district Rawalpindi, out of 282 respondents around 50% agreed or strongly agreed with the statement - while about 14.5% of the respondents disagreed or strongly disagreed with the statement. Other 21% did not know about it, and around 14% neither agreed nor disagreed.

In Charsadda there seems to be a perception that insurance premium is an unnecessary expense, and in Poonch the reverse is more prevalent. Remembering that in Poonch district some respondents affirmed that their households had some kind of insurance policy, so it is plausible to conclude that their perceptions are based on practical experience while in case of respondents in Charsadda no such conclusion would be practical. However, we cannot conclude anything in case of Tharparkar, because 89% of respondents don't know about it. Generally, if premium payment is considered to be an unnecessary expense by respondents, then the readiness to pay insurance premium would be low and insurance companies might face problems therein.

From gender perspective, in terms of level of trust in insurance companies to pay out what was promised, most of the males as well as females are concentrated in the 'do not know' category. Within males, 17% were found to either strongly agree or agree with the statement, while this ratio was around 15% in case of females.

In order to capture the **satisfaction levels** of the respondents about the insurance policies that their household member(s) were availing, some further questions were asked. However, as most of the respondents (97%) denied any insurance policy purchased by their household therefore the satisfaction levels about amount of premiums, paperwork, location of insurance provider, and speed of payout were just captured on the basis of some respondents. Table 19 presents the relevant results.

Most of the respondents who answered about the satisfaction with the dimension of insurance policies were satisfied with the amount of premium being charged, but around 60% were dissatisfied with the amount of paperwork needed in the insurance process. 40% of the respondents were satisfied with the location of the insurance provider, but 40% were also unsatisfied or very unsatisfied. In terms of payout speed, 25% were very satisfied, while 50% were neutral, and another 25% were very unsatisfied. The number of respondents in this case is too small to generalize the results.

Table 19: Satisfaction about dimensions of insurance

| Satisfaction level | Premiums | Amount of paperwork needed | Location of insurance service provider | Speed of payout when any event occurs (illness, accident, theft) |
|-------------------------------|-----------------|-----------------------------------|---|---|
| Very unsatisfied | 20% | 10% | 20% | 25% |
| Unsatisfied | 10% | 50% | 20% | 0 |
| Neutral | 0 | 10% | 20% | 50% |
| Satisfied | 60% | 30% | 40% | 0 |
| Very satisfied | 10% | 0 | 0 | 25% |
| Total (actual numbers) | 10 | 10 | 10 | 8 |

The next logical question emerges about the reasons of low prevalence of insurance in the surveyed localities. Table 20 shows the distribution of responses about the reason for 'no insurance'.

Table 20: Reasons for no insurance

| District | Reasons for no insurance (in percentages) | | | | | | | | | | | |
|---|---|---------------------------------------|---|---|------------------|--------------------------|---|----------------------------|----------------------------|-------------------------|-----------------------|------------|
| | 1. Do not know enough about it | 2. Do not know where to get insurance | 3. Insurance companies are too far away | 4. Insurance companies take too long to pay out | 5. Too expensive | 6. Do not trust insurers | 7. I do not trust that insurance companies will pay out what promised | 8. Application too complex | 9. Not needed/not relevant | 10. Never thought of it | 11. Religious reasons | 12. Others |
| Rawalpindi | 43.5 | 11.1 | 0.0 | 0.7 | 29.9 | 1.5 | 1.8 | 0.7 | 16.2 | 18.8 | 10.7 | 0.4 |
| Charsadda | 75.0 | 3.6 | 0.5 | 0.0 | 30.9 | 0.0 | 0.5 | 0.0 | 0.9 | 9.5 | 20.5 | 0.5 |
| Tharparkar | 92.3 | 27.8 | 19.6 | 10.3 | 12.4 | 5.2 | 1.5 | 7.7 | 1.5 | 1.0 | 1.0 | 0.0 |
| Ziarat | 66.4 | 25.1 | 1.9 | 0.0 | 4.2 | 1.5 | 1.2 | 10.4 | 2.3 | 24.7 | 8.9 | 0.4 |
| Poonch | 6.5 | 0.9 | 0.0 | 0.0 | 82.3 | 26.3 | 1.3 | 15.5 | 0.9 | 3.9 | 31.5 | 0.9 |
| Note: This is a multiple-response question, so total may exceed 100%. | | | | | | | | | | | | |

The above table shows district-wise results about the reasons for ‘no insurance’ in respondents’ opinions. In all districts, except Poonch, ‘do not know enough about it’ came up as the most frequent reason – and it ranged from 92% in Tharparkar to 43% in Rawalpindi. In district Poonch ‘too expensive’ was the most dominant response (by 82% of respondents).

The second most frequent reason was ‘too expensive’ in Charsadda and Rawalpindi districts, and ‘did not know where to get it’ in districts Tharparkar and Ziarat. ‘Religious reasons’ came up as the second most frequent answer in Poonch district, and as third frequent reason in districts Ziarat and Charsadda.

From the demand for insurance point of view – the above reasons can be used to make effective strategies, where sensitization of potential clients about microinsurance products and their customization according to needs/religious orientations might be looked into.

Demand Assessment and Purchase of Microinsurance

In order to assess the demand for climate risk insurance, respondents were asked specific questions. Only 10 respondents out of 1,410 affirmed that they had heard about weather related microinsurance. This means that a lot of dissemination effort is required before launch of such insurance products. Similarly, the sources of information varied from television, to radio, to NRSP, and neighboring farmer or village shopkeeper. Hence, there is perhaps no dominant source of such information at present.

Demand for Microinsurance

Demand for micro insurance is an important component of the Assessment. In order to assess the demand for micro insurance two main factors/components were looked into:

- Willingness-to-Pay for climate risk insurance
- Ability-to-Pay for climate risk insurance

Willingness-to-Pay and Ability-to-Pay are two economic tools used to assess the need for climate risk insurance in Pakistan in this Demand Assessment report. *Willingness-to-Pay is the amount a consumer will pay for a particular quantity of good or a service. In consumer demand theory, Willingness-to-Pay automatically implies Ability-to-Pay, while in social science writings the two notions are sometimes contrasted.*¹⁰

¹⁰ Varley, 1995. Willingness To Pay, Ability To Pay, GDRC. Available: <http://www.gdrc.org/icm/terms.html> [Last accessed 18th April 2016]

The Willingness-to-Pay approach is an evaluation method used to determine the maximum amount of money an individual is willing to pay to gain a particular benefit (e.g. receive insurance cover)¹¹. It should be noted that Willingness-to-Pay is not linked with budget or availability of money at that time. Willingness-to-Pay is a kind of inclination to buy a product or service based on its characteristics and perceived benefits.

From a neo-classical economic perspective, a buyer typically conducts a cost-benefit analysis by comparing the price with the expected benefit/utility of the good/service. Hence, the amount of money (Willingness-to-Pay) that the person is willing to spend (amount of premium in microinsurance case) can be treated as a proxy for expected utility.

In the Demand Assessment, Willingness-to-Pay was determined on the basis of the question ‘would you like to purchase climate risk insurance if available? Overall 31% of respondents showed their *Willingness-to-Pay* microinsurance, 69% chose otherwise. The figure on the next page gives a detailed district-wise data for Willingness-to-Pay. Tharparkar, which ranks amongst the lowest-income districts of the country, has shown 56% respondents are willing to pay for microinsurance. It implies that people make decision to buy microinsurance based on several contributing factors including vulnerability, socioeconomic status and available coping mechanisms.

Ability-to-Pay is a subjective judgment predicated on some assumption as to what people ought to pay. The low-income clients are said to have a lower ability to pay than middle-income earners, irrespective of whether or not they buy the good/service. Ability-to-Pay is linked with budget and availability of funds at the given time. It captures affordability based on real time income. Ability-to-Pay is about ‘how much’ and ‘for how long’ a client is willing to pay premium for microinsurance. The question: ‘*How much would you like to pay per year (as premium) and for how many years?*’ was asked to assess the ability to buy. More than 47% showed Ability-to-Pay up till 1,000 PKR, 22% had Ability-to-Pay between 1-2,000 PKR and 30% could spend more than 2,000 PKR on amount of premium.

The Demand Assessment results showed that overall around 31% respondents showed their willingness to purchase microinsurance if available. In district-wise analysis, there was relatively more willingness to purchase in district Tharparkar where 56% of the respondents were likely to purchase microinsurance if made available. Further, the proportions of respondents in likely

¹¹ European Observatory Health System And Policies. From www.euro.who.int

categories of willingness in districts Ziarat and Poonch were 41% and 42% approximately, which is higher than in the other remaining districts.

In the remaining two districts i.e. Rawalpindi and Charsadda, only 11% of the respondents showed willingness to buy microinsurance if made available. This tendency may be rationalized on the basis of the perceptions in these two districts where respondents thought that insurance was too expensive, or they would not be willing to buy owing to religious reasons.

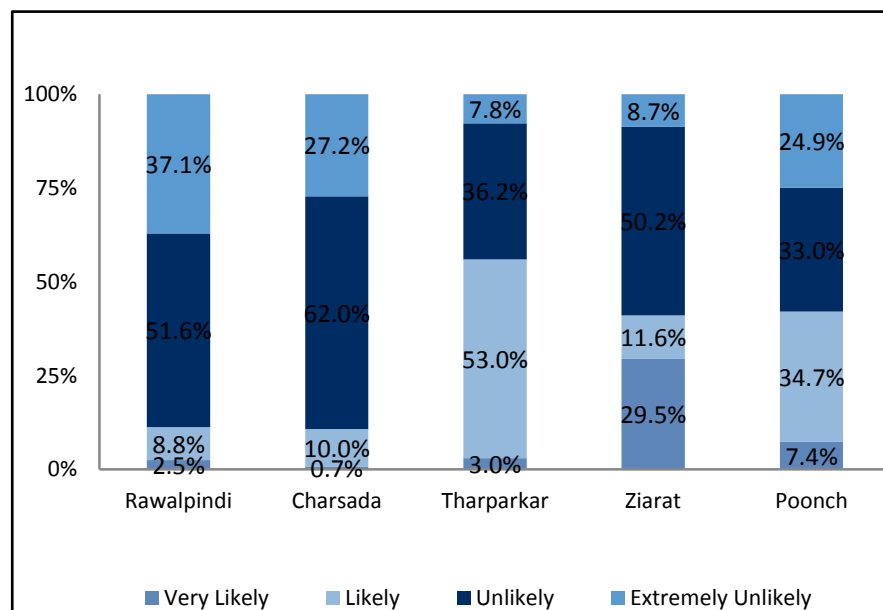


Figure 17: Willingness to Pay for Microinsurance

The following table gives a snapshot on the basis of the gender of the respondents. It is evident that around 29% of the male respondents and 36% of the female respondents were likely or very likely to buy microinsurance.

Table 21: Willingness to pay for insurance

| Would you like to purchase weather (micro) insurance if available | | | | | |
|---|-------------|--------|----------|--------------------|-------|
| | Very likely | Likely | Unlikely | Extremely unlikely | Total |
| Male | 9.5 | 19.4 | 53.8 | 17.3 | 100% |
| Female | 7.7 | 26.8 | 38.2 | 27.3 | 100% |
| Total | 8.7 | 22.7 | 46.9 | 21.7 | 100% |

The amount of premium and the length of insurance policy are important determinants of demand for insurance. This information can also be used for design of microinsurance products/services.

Table 22: Willingness to pay premium and length of insurance policy

| District | Willing to pay premium, and length of insurance policy | | | | | |
|---------------------------|--|-----------------------|------------------------|----------------|-----------------------|------------------------------------|
| | Average willingness to pay (Amount of premium per annum in PKR.) | | | | | Average length of insurance policy |
| | Up to PKR 1000 | Between PKR 1001-2000 | Between PKR. 2001-5000 | More than 5000 | Number of respondents | Number of years |
| Rawalpindi | 57.7% | 30.8% | 3.9% | 7.7% | 26 | 5.9 |
| Charsadda | 28.0% | 68.0% | 0.0% | 4.0% | 25 | 3.9 |
| Tharparkar | 93.6% | 1.6% | 1.6% | 3.2% | 125 | 2.3 |
| Ziarat | 2.7% | 9.7% | 27.4% | 60.2% | 113 | 1.2 |
| Poonch | 42.5% | 46.9% | 8.9% | 1.8% | 113 | 9.0 |
| Overall % (all districts) | 47.3% | 22.6% | 10.9% | 19.2% | 402 | 3.8 |

The total number of respondents who showed willingness to pay premium for microinsurance was 402. Moreover, out of these specific 402 respondents, the majority of the respondents (87%) was from the three districts Tharparkar, Ziarat, and Poonch. Overall, 47% respondents opined that they would be ready to pay up to **PKR 1,000/-** as premium, and another 23% respondents opined in favor of the amount between **PKR 1,001/- to 2,000/-** per annum as premium.

District-wise analysis showed that in Tharparkar, 94% out of 125 relevant respondents were willing to pay up to **PKR 1,000/-** and the average length of policy was calculated to be little above 2 years.

In Ziarat, 60% out of 113 respondents showed their willingness to pay more than **PKR 5000/-**, while 27% as between **PKR 2001/- and 5000/-**, and the average length of policy was calculated to be little above 1 year.

In Poonch, 47% out of 113 respondents showed their willingness to pay **PKR 1,001/- to 2,000/-** per annum as premium, another 43% of the respondents were inclined to pay up to **PKR 1,000** as premium.

In Rawalpindi, most of the respondents (58% out of 26) showed inclination to pay up to **PKR 1,000** as premium and further 31% respondents were willing to pay between **PKR 1,001/- to 2,000/-** per annum, and the average length of insurance policy is calculated to be 6 years. In Charsadda district, 69% of the 25 respondents showed preference for **PKR 1,001/- to 2,000/-** per annum, and the average length of insurance policy came out to be 4 years.

Table 23: Amount of Premium

| How much would you like to pay (premium) per year? | | | | | |
|--|----------------|-----------------------|------------------------|----------------|-------|
| Gender | Up to PKR 1000 | Between PKR 1001-2000 | Between PKR. 2001-5000 | More than 5000 | Total |
| Male | 36.2% | 26.6% | 13.5% | 23.7% | 100% |
| Female | 59.0% | 18.5% | 8.2% | 14.4% | 100% |
| Total | 47.3% | 22.6% | 11.0% | 19.2% | 100% |

The gender based analysis shows that among females, some 60% are willing to pay up to **PKR 1,000** per year as premium. On the other hand, around 24% of the male and 14% of female respondents showed their inclination to pay more than **PKR 5,000/-** as premium.

Climate Events, Coping Mechanism and the Potential Role of Microinsurance

In this section, occurrence of different extreme weather events and coping mechanisms, have been analyzed.

Although the most repeated response in terms of coping mechanism was 'did nothing', yet other coping mechanisms varied across events. The most occurring event, in the light of the respondents' opinions, was property or house damage. In this particular event, 17% used their past savings, while others either borrowed from relatives/friends (17%) or from banks (3%).

About 5% sold their assets/jewelry to respond to the damage. In case of crops/livestock loss, around 21% respondents opined that they used past savings, whereas 13% respondents borrow from relatives/friends.

In case of heavy rains/floods, some 19% of the respondents borrowed from relatives/friends whereas, 6% used savings, and 3% migrated to another area with all members of the household.

In drought situation, most of the respondents (17.1%) borrowed from

friends/relatives, or head of the household migrated to another area (13%). A pattern that emerges here is that in most of the events, households used some kind of monetary resources for making adjustments either using past savings, or borrows money from friends/relatives.

Table 24: Response to the events

| Event | | Response to extreme weather events (%) | | | | |
|-------------------------|-------------|--|--|--|--------------------|-------------------------|
| Property/ house damage | Did nothing | Used savings | Borrowed from relatives/ friends | Sold assets/ jewelry | Borrowed from bank | Did not know what to do |
| | 45.6 | 17.0 | 16.5 | 4.9 | 3.4 | 12.6 |
| Crop/ livestock loss | Did nothing | Used savings | Borrowed from relatives/ friends | Others | Sold livestock | Did not know what to do |
| | 42.1 | 20.8 | 12.9 | 6.2 | 3.9 | 14,0 |
| Heavy rain/ flash flood | Did nothing | Borrowed from relatives/ friends | Used savings | All household migrated to another area | Others | Did not know what to do |
| | 66.4 | 19.0 | 6.0 | 2.6 | 1.7 | 4.3 |
| Drought | Did nothing | Borrowed from relatives/ friends | Head of household migrated to another area | Sold livestock | Borrowed from bank | Did not know what to do |
| | 46.6 | 17.1 | 12.5 | 4.6 | 3.4 | 15.9 |
| | | | | | | |

Financial Stability, Accessibility and Microinsurance

The financial position of a household is very important from the insurance perspective. Premiums are to be paid regularly which necessitates existence of financial capacity and saving habits. In this section, different related variables have been analyzed to draw an overall picture.

Saving account

Overall only 13% (i.e. 182 out of all respondents) households were recorded to have a saving account. Within districts, 35% of respondents from Ziarat and 16% from Rawalpindi stated that their household had a saving account, while this ratio was around 8% and 5% in districts Poonch and Tharparkar. In Charsadda, the ratio is extremely low i.e. 0.4%.

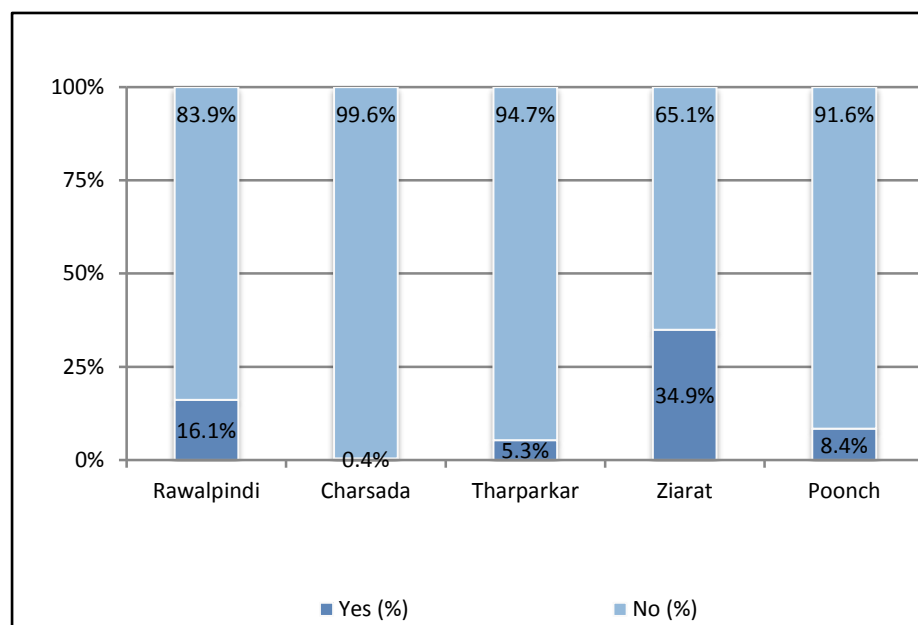


Figure 18: Household Savings

Out of the 182 who had some kind of saving account, a vast majority deposited the saving in either Government Banks (49%) or Commercial Banks (34%). Only 13% kept savings within households and 2% deposited it in Post Office. The remaining (2%) respondents kept savings either with informal groups or at other places. The following figure depicts this pattern:

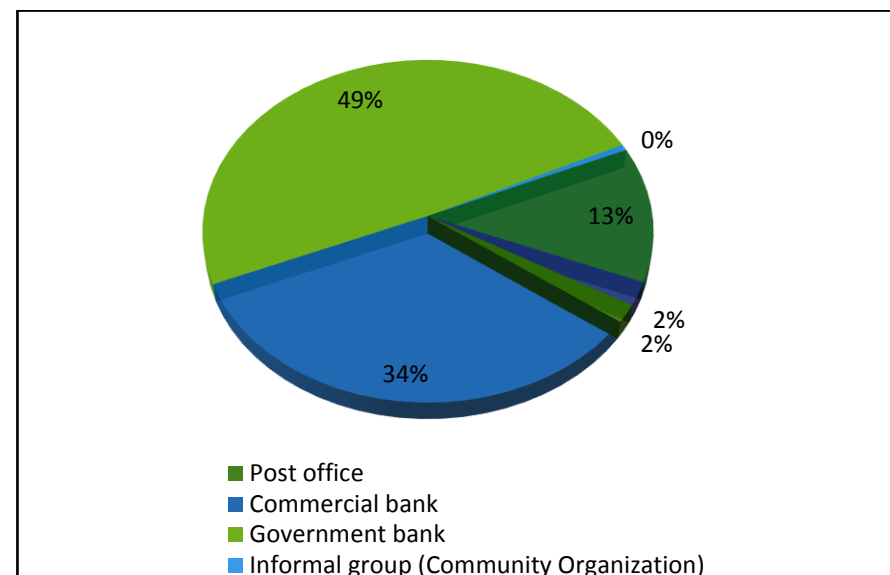


Figure 19: Savings Storage

As far as the frequency of savings (weekly, monthly, quarterly, yearly, not regular) is concerned, most of the respondents (46%) shared that their savings were not regular, while 31% reported to save on monthly basis and 19% on yearly basis. Respondents with quarterly or weekly savings were 3% and 1% respectively.

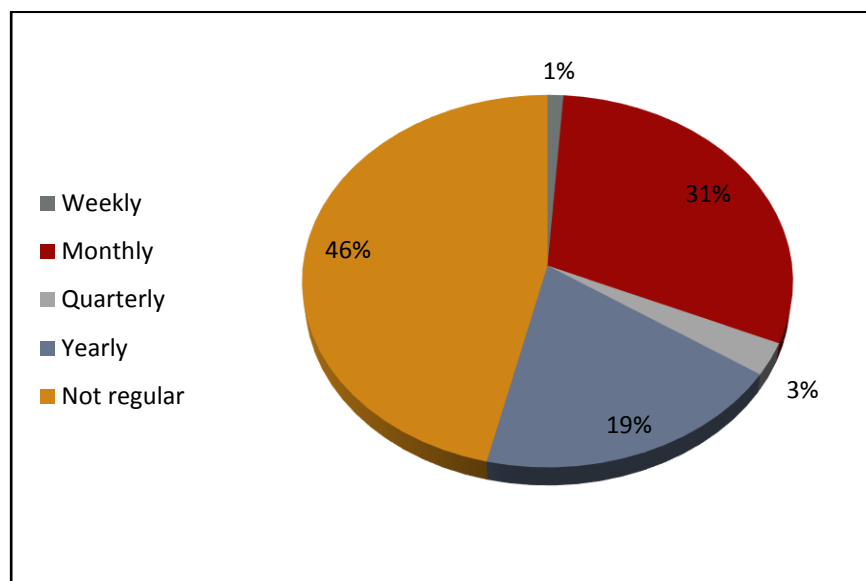


Figure 20: Frequency of Savings

Purpose of saving

Data shows that households save a part of their incomes for varied purposes, and the district-wise results are presented in the table to the right. Overall, it appeared that most of the respondents save for health related expenditures. In district-wise analysis, the most dominant purpose of saving in case of Rawalpindi, Charsadda, and Ziarat districts were health care, while in case of Tharparkar and Poonch the dominant purpose was 'to respond to emergencies' in the opinion of respondents. The second most dominant purpose of savings in both Rawalpindi and Poonch districts appeared to be for wedding and other occasions, while in Charsadda it is to respond to emergencies and in Ziarat it is for starting a business in future.

Table 25: Purpose of Savings

| District | Purposes of Saving | | | | | | | Total in numbers |
|---------------------------|-------------------------------|---------------------------|------------------------|---------------------------------|-------------|------------|--------|------------------|
| | To start a business in future | To respond to emergencies | To buy a house or land | For wedding and other occasions | Health care | Educa tion | Others | |
| Rawalpindi | 4.3% | 0.9% | 10.4% | 20.8% | 44.6% | 18.2 % | 0.9% | 231 |
| Charsadda | 0.0% | 27.3% | 9.1% | 0.0% | 45.5% | 0.0% | 18.2% | 11 |
| Tharparkar | 12.5% | 45.8% | 4.2% | 4.2% | 29.2% | 0.0% | 4.2% | 24 |
| Ziarat | 24.6% | 3.5% | 16.8% | 4.4% | 43.4% | 7.4% | 0.0% | 203 |
| Poonch | 8.3% | 36.1% | 2.8% | 22.2% | 8.3% | 13.9 % | 8.3% | 36 |
| Overall % (all districts) | 13.1% | 7.1% | 12.1% | 13.1% | 40.8% | 12.3 % | 1.6% | 505 |

It includes all cases who do savings, whether or not they have savings accounts

Total savings (annual)

Another important dimension of demand for microinsurance would be the saving of a household. In response to the question related with yearly amount of saving, within the districts of Charsadda, Tharparkar and Poonch, a large majority of respondents (i.e. 99%, 93%, and 90%) opined to have no savings or they did not respond to the question. In these three districts, most of the respondents who saved were in the category of Rs. 10,000/- or less per annum.

Table 26: Total Annual Savings in all districts

| District | Total Savings (Annual) | | | | | |
|------------|----------------------------------|----------------|-----------------|-----------------|-----------------|----------------|
| | Have no savings or missing cases | 10,000 or less | 10,000 – 30,000 | 30,001 – 50,000 | 50,001 – 70,000 | 70,001 or more |
| Rawalpindi | 28.1% | 23.5% | 22.8% | 6.3% | 6.3% | 13.0% |
| Charsadda | 98.6% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Tharparkar | 92.6% | 6.0% | 1.4% | 0.0% | 0.0% | 0.0% |
| Ziarat | 30.2% | 9.1% | 19.6% | 12.7% | 5.8% | 22.6% |
| Poonch | 89.5% | 8.1% | 1.4% | 0.4% | 0.4% | 0.4% |

Note: All missing cases (722 cases) are assumed “have no saving”.

Respondents from Rawalpindi and Ziarat districts reporting no saving or no response to the question were 28% and 30% respectively within the specific districts.

Within Rawalpindi around 24% respondents stated that they saved PKR 10,000/- or less per annum, while around 23% shared that their saving were between PKR 10,000/- to PKR 30,000/- annually. Some 13% saved between 30,000/- to 70,000/- PKR, and a same proportion of respondents was found in the category of PKR 70,000/- or more. On the other hand in Ziarat, the most frequent responses were found to be in two categories i.e. between PKR 10,000/- to PKR 30,000/- (around 20%), and PKR. 70,000/- or more (around 23%).

What if: Decision about spending the ‘gift money’?

Although there appeared to be slight variation in the responses to this question, yet there was an important pattern as well. As the amount of hypothetical gift money was increased, most of the respondents tend to cluster towards either ‘invest in business,’ or ‘save it,’ and this pattern was found in all districts with slight variations. For example, as the gift money was hypothetically set to be at up to PKR 3,000/-, most of the respondents showed inclination towards ‘spend it on necessary items like food’, and the amount is increased up to PKR 25,000/- , then the most of respondents tend towards other categories such as ‘Spend money on productive assets like livestock or ‘Spend it on non-productive items like electronics and other consumer goods’ or ‘save it’ or ‘invest it’. However, when the amount was further increased

up to PKR 100,000/-, the respondents tended to cluster towards ‘invest in business’ or ‘save it’. Annex VIII gives detailed data about the gift money expenditure patterns.

Any reserved savings for emergencies?

Households save for various purposes, as observed earlier. However, households may like to reserve some amount for emergencies that is not touched in any other situation. In response to such a question, around 27% of the respondents showed a yes, while other 73% opined in negative.

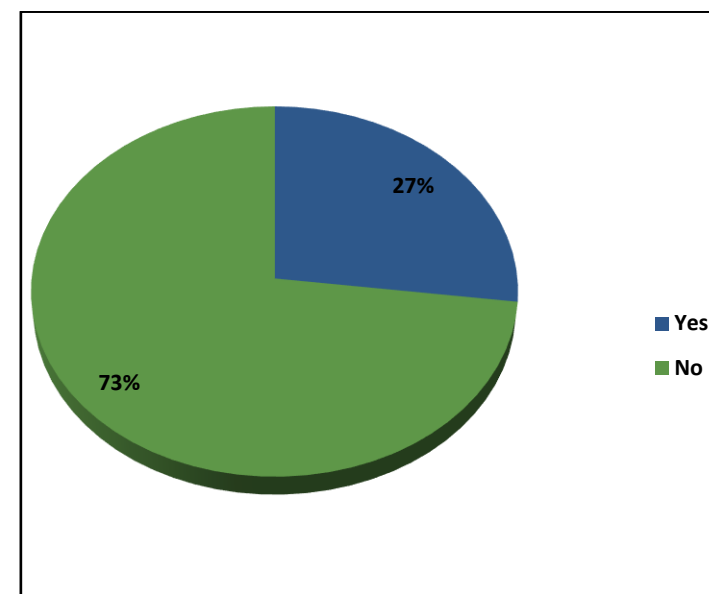


Figure 21: Reserved Savings for Emergencies

However, the results for the districts differ significantly. While the number of respondents with reserve savings for emergencies came up to be 48% in Rawalpindi and 70% in Ziarat, in Charsadda and Tharparkar the proportion of such respondents who kept reserved savings for emergencies were just 6% each, and 7% in Poonch. The results are shown in the next figure.

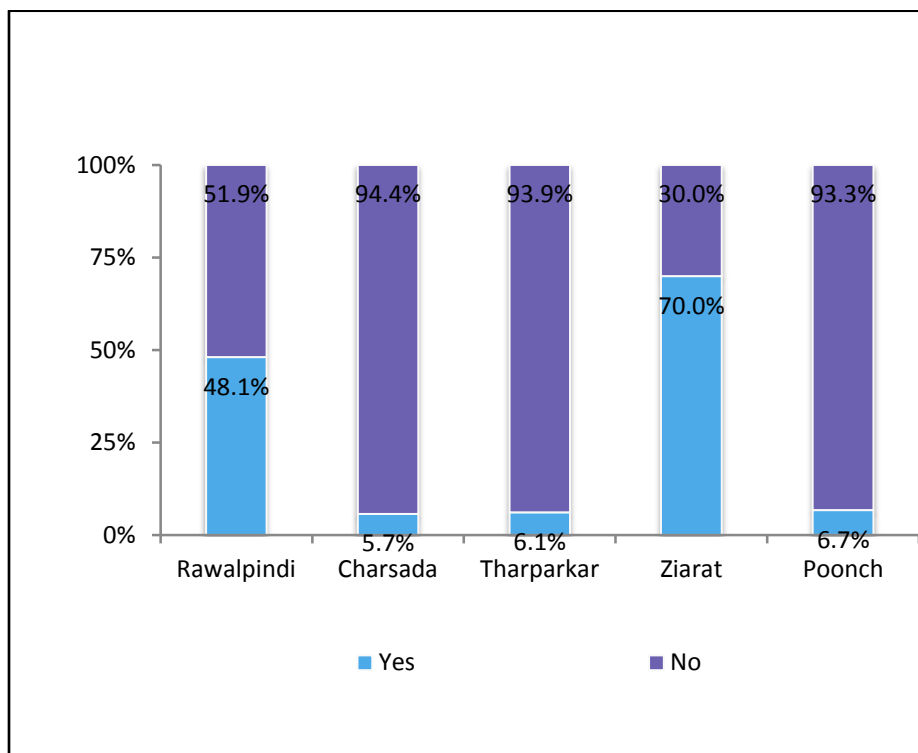


Figure 22: Savings for Emergencies

Access to credit

Households may seek access to credit to meet various needs. In response to a question whether the household sought any loan in last two years, the majority of respondents (65%) said 'no', while the other 35% reported a 'yes' that they sought loan.

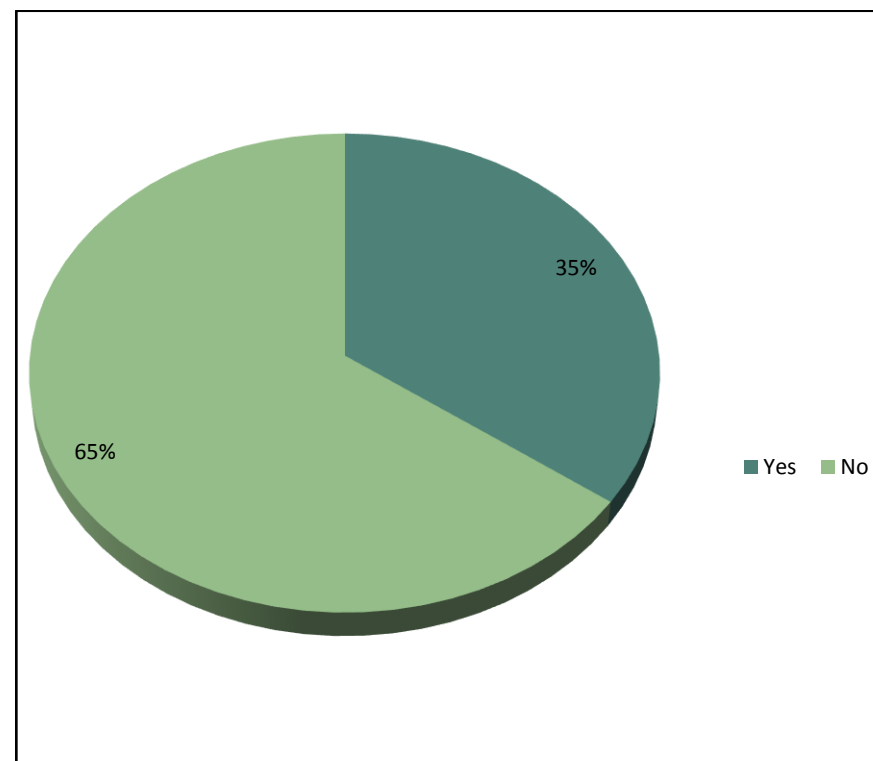


Figure 23: Loan Status of Households

District-wise analysis shows that the proportion of households in Charsadda and Tharparkar was almost 54% and 48% respectively. The proportion of such households which sought loans in the last two years was around 27% in Rawalpindi, 25% in Ziarat and 21% in Poonch.

Source of credit

The question logically flowing from the above discussion would be the major sources of loans. In response to such a question, the respondents were allowed to choose multiple answers so that the variations about the sources of loans at household level may be judged.

Table 27: Major sources of credit/loan

| District | What kind of lender your household borrowed from? | | | | | | | | | |
|-----------------------------------|---|--------------------------|-------------|-----------------|--------------------|--|-----------|------------|------|-------|
| | Commercial bank | Microfinance institution | Moneylender | Government bank | Friends/neighbours | Farmer/community associations/cooperatives | Relatives | Shopkeeper | NGOs | Other |
| | % | % | % | % | % | % | % | % | % | % |
| Rawalpindi | 9.1 | 19.5 | 0.0 | 3.9 | 23.4 | 2.6 | 59.7 | 2.6 | 0.0 | 1.3 |
| Charsadda | 0.6 | 2.6 | 0.0 | 0.6 | 50.0 | 1.3 | 59.1 | 3.2 | 0.0 | 0.6 |
| Tharparkar | 6.0 | 17.3 | 16.5 | 2.3 | 15.0 | 0.8 | 12.8 | 45.1 | 24.1 | 6.0 |
| Ziarat | 0.0 | 0.0 | 13.6 | 0.0 | 42.4 | 1.7 | 52.5 | 1.7 | 0.0 | 1.7 |
| Poonch | 1.8 | 36.8 | 5.3 | 5.3 | 14.0 | 1.8 | 31.6 | 7.0 | 8.8 | 1.8 |
| Multiple response variable | | | | | | | | | | |

As shown in the table above, relatives and friends/neighbours appeared to be most frequent sources of credit in all districts except in Tharparkar where shopkeeper and NGOs were reported to be main sources of credit. Other sources of credit included micro-finance institutions in Tharparkar (17.3%), Rawalpindi (19.5%), and Poonch (37%).

Average number of loans per household

The following table gives a snapshot of results about the average number of loans per surveyed household in all districts. Overall, the largest proportion of respondents (i.e. 66%) falls in the category of 'none' – signifying no loan.

Table 28: Average number of loans per household

| District | Average Number of Loans (per household) | | | | | | |
|----------------------------------|---|-------|------|------|------|-----------|--------|
| | None | 1 | 2 | 3 | 4 | 5 or more | Number |
| Rawalpindi | 72.6% | 18.3% | 7.0% | 1.8% | 0.0% | 0.4% | 285 |
| Charsadda | 46.2% | 39.2% | 8.7% | 2.5% | 2.5% | 1.1% | 286 |
| Tharparkar | 52.1% | 35.1% | 5.7% | 3.9% | 2.5% | 0.7% | 282 |
| Ziarat | 78.6% | 21.5% | 0.0% | 0.0% | 0.0% | 0.0% | 275 |
| Poonch | 79.3% | 17.5% | 1.8% | 0.0% | 0.0% | 1.4% | 285 |
| Overall % (all districts) | 65.8% | 26.2% | 4.7% | 1.6% | 1.0% | 0.7% | 1413 |

Further, around 26% of respondents are in the category of '1' loan. In district-wise analysis, it is found that the highest proportion within '1 loan' category i.e. 39% was found in Charsadda (remember that the sources of loan in Charsadda were relatives and friends/neighbours) and 35% in Tharparkar where shopkeepers, NGOs, microfinance institutions, and money lenders were most noted sources of loans.

Amount of loan recently applied for

Overall around 40% of the respondents (out of 445 who shared their information) told that the amount of loan applied for was up to PKR 25,000/-, and further 27% mentioned that it was between 25,001/- to 50,000/-.

The amount of loan that was recently applied for by households varies across districts. For example, in Rawalpindi district the most frequent loan applied for was of lesser than 25,000 PKR (37% respondents), while 25% respondents opined that they applied for a loan which ranged between 25,001/- to 50,000/- PKR. Another 15% respondents opined that the sought loan amount was between 50,001 to 100,000 PKR, and the remaining 22% said that the amount was 100,001 or more.

Table 29: Amount of loan recently applied for

| District | Amount of loan recently applied for | | | | |
|----------------------------------|-------------------------------------|------------------|-------------------|-----------------|------------|
| | Less than 25,000 | 25,001 to 50,000 | 50,001 to 100,000 | 100,001 or more | Number |
| Rawalpindi | 37% | 25% | 15% | 22% | 67 |
| Charsadda | 32% | 27% | 25% | 16% | 153 |
| Tharparkar | 60% | 27% | 9% | 5% | 128 |
| Ziarat | 22% | 22% | 30% | 26% | 46 |
| Poonch | 35% | 29% | 18% | 18% | 51 |
| Overall % (all districts) | 40% | 27% | 18% | 15% | 445 |

The dominant tendency, as apparent from simple data analysis, is that in all districts (except Ziarat) most of the respondents belonged to the category of loan applied for up to 25,000 PKR. This proportion of respondents ranged from 32% in Charsadda to 60% in Tharparkar. On the other hand, in the case of Ziarat, the most dominant category was from PKR 50,001 to 100,000.

The loan application, however, does not mean that loan will be approved. Therefore, it is logical to expect that there might be some rejections. In response to such a question, around 13% of the respondents opined that they faced such rejections. Around 87% of the relevant respondents did not face rejection while they applied for loan.

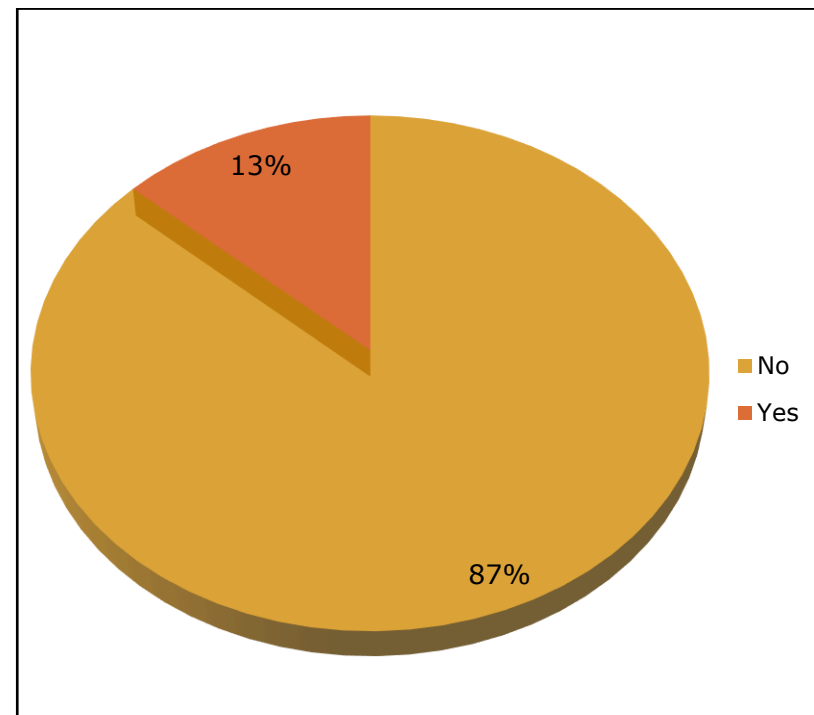


Figure 24: Rejection of loan requests in the past

Table 30: Reasons for non-approval of loan

| District | Reason for non-approval of loan | | | | |
|-------------------|---------------------------------|--------------------|-------------------|------------------|-------|
| | Don't Know | Lack of collateral | Not enough income | Risky occupation | Other |
| Rawalpindi | 20% | 60% | 20% | 0% | 0% |
| Charsadda | 19% | 0% | 81% | 0% | 0% |
| Tharparkar | 21% | 0% | 50% | 18% | 11% |
| Ziarat | 33% | 28% | 28% | 6% | 6% |
| Poonch | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% |

Next, those respondents who applied for a loan and faced rejection gave various reasons for refusal. In Rawalpindi most of the respondents (60%) opined that lack of collateral was the main reason, while in Poonch, Charsadda and Tharparkar, most of the respondents (100%, 81% and 50% respectively) mentioned 'not enough income' as the main reason for such rejection.

Loan ever taken to overcome losses from any extreme weather condition

People facing extreme weather conditions may also seek loans that they may use in the recovery/rehabilitation process. Around 39% of respondents from all districts mentioned that they did not take loan to overcome losses from extreme weather conditions. Around 56% of the respondents reasoned out that it was needed to overcome the property damage and the average amount of such loan was calculated through data analysis to be around PKR 104,500/-. A small fraction of respondents (1.5%) revealed that they took loan to overcome the crop damage and the average loan amount came up to be around PKR 231,500/-.

Table 31: Ever taken a loan in extreme weather conditions

| Ever took a loan to overcome the losses from extreme weather conditions | | | | | |
|---|---------------------------------|-----------------------------|--------------------------------|-------------------------------|------------------------------|
| No | Yes, because of property damage | Yes, because of crop damage | Yes, because of livestock loss | Yes, because of business loss | Yes, because of other reason |
| 39.1% | 55.6% | 1.5% | 1.0% | 0.3% | 2.6% |
| Loan Amount (Average) | 104,488 | 231,447 | 80,333 | 170,000 | 24,059 |

Similarly, 1% of the respondents opined that they took loan due to livestock loss, and the average amount of loan in this specific case was calculated to be PKR 80,500/-. For the respondents who took loan to overcome business loss (0.3% of respondents), the average amount was calculated to be PKR 170,000/-.

Loan from friends and relatives in the time of need

In the hour of need, people may borrow from friends and/or relatives. In response to a what-if question, respondents opined that they could borrow from friends and/or relatives. On average, respondents opined that they could borrow PKR 30,500/- from friends and PKR 46,500/- from relatives, if needed.

Although the amount of loans that respondents could borrow from friends/family members varied across districts, yet it emerged in data analysis that respondents could borrow more from relatives as compared to friends, if need be. The loan amount, on average, from relatives could be as high as PKR 67,000 (in Ziarat) or as low as PKR 5,800/- (in Tharparkar). District-wise results are presented in the following figure.

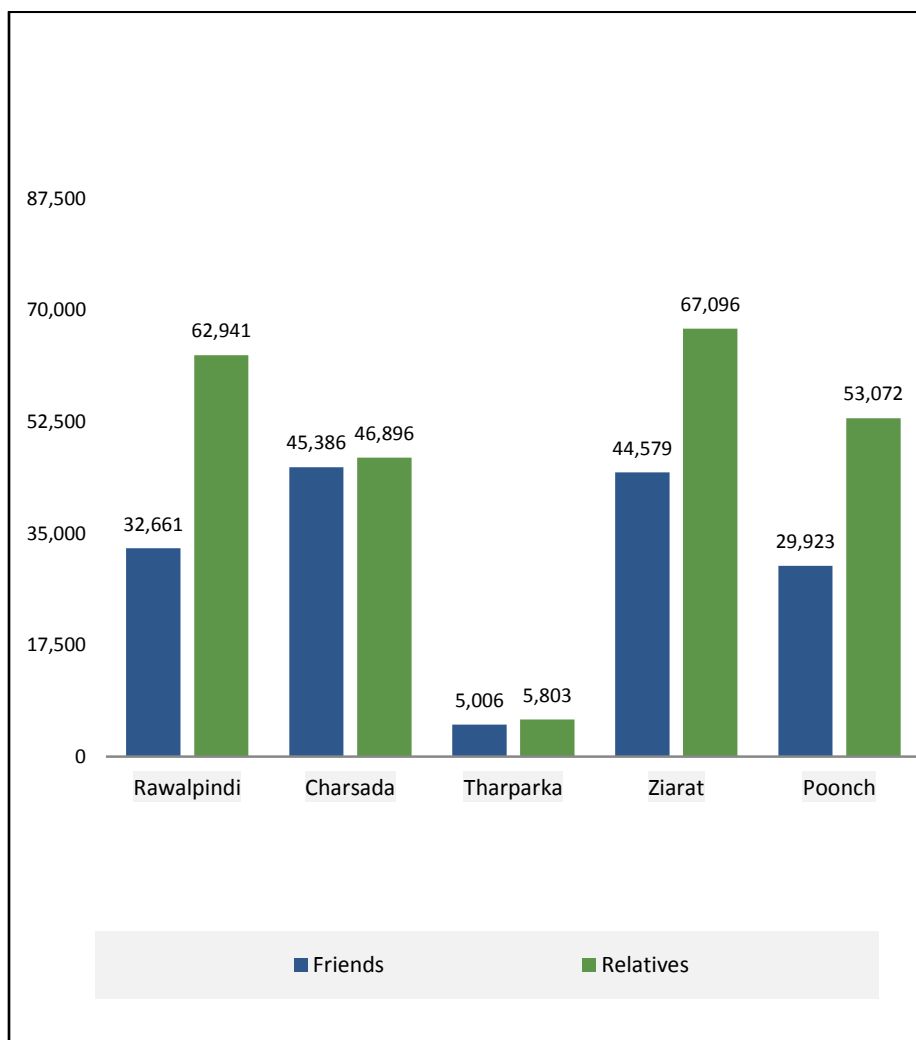


Figure 25: Amount of loans sought

As can be seen, the average amount of such loans from friends could be as high as 45,400/- (in Charsadda) and low as PKR 5,000/- (in Tharparkar). This information may be used for working out the credit-worthiness or social collateral.

Remittances (inward and outward) during last one year

The overall proportion of those respondents who received or sent local or foreign remittances was low. Around 4% of the respondents received local remittances (i.e. from within Pakistan), and the average amount was calculated to be PKR 177,000/- in last year on the basis of information provided by the respondents. On the other hand, around 5% respondents reported that they received around PKR 103,000/-, on average, as remittance from foreign sources.

Table 32: Remittances

| Any remittances received or paid? | | | |
|---|---------------------------|-----------------------|-------------------------|
| Yes received in (local) | Yes received in (foreign) | Yes, paid out (local) | Yes, paid out (foreign) |
| 4.1% respondents | 4.7% respondents | 0.1% respondents | 0.7% respondents |
| How much (average amount) during last one year? | | | |
| 177,069 | 102,715 | 250,000 | 109,400 |

On the other hand, just 0.1% of the respondents reported that they paid out remittance to local destinations within Pakistan, and the amount remitted was calculated to be PKR 250,000/- on average. Similarly, around 0.7% of the respondents mentioned that they sent remittance to foreign destination and the average amount was calculated to be around PKR 109,500/-.

Channels of remittances

As far as the channels used by respondents for remittances is concerned, most of the respondents said that they either used mobile money services like *easy paisa* (38% respondents) or banks (34%), or money transfer services like *Western Union* (23%).

Can women buy (access) the insurance products

Generally, in the opinions of a large majority of respondents (90%), women cannot decide on their own to purchase insurance. The following table shows some statistics in this regard:

Table 33: Women and insurance purchase decision

| Can women buy insurance on their own? | | | | |
|---|-----------------|-------------|-------------|--------------------|
| No | Yes | | | |
| 90% | 10% respondents | | | |
| respondents | | | | |
| If no, then whose permission is required? | | | | |
| Husband | Father | Son | Brother | Any other relative |
| 91% | 5% | 1.5% | 0.6% | 1.8% |
| respondents | respondents | respondents | respondents | respondents |

Women may buy insurance after seeking permission from their husbands (according to 91% of respondents), or other male members of the household e.g. father, brother, or son etc. It shows that the financial decision making in case of insurance would be in the hands of male members of the household.

Expenditures and Assets

The **monthly expenditure** on various heads is analyzed in this section. Insurance premium, food, clothing, health and education are looked into for further analysis.

In case of monthly household expenditures, the average was calculated to be PKR 24,575/-. However, it varied across districts where it was found to be around PKR 32,200/- in Ziarat and PKR 30,400/- in Poonch while it was relatively lower in other districts, and lowest in Tharparkar to be around almost PKR 12,200/-. The following table presents some important statistics:

Table 34: Monthly Households Expenditures

| District | Shares of Monthly Household expenditure | | | | | | Number |
|---------------------------|---|---|---|--|---|--|--------|
| | Total (In PKR) | Food (As % of total expenditures) | Clothing (As % of total expenditures) | Insurance premium (As % of total expenditures) | Health (As % of total expenditures) | Education (As % of total expenditures) | |
| Rawalpindi | 28213 | 52.2% | 5.2% | 0.2% | 4.7% | 5.5% | 285 |
| Charsadda | 20012 | 55.4% | 7.3% | 0.4% | 14.7% | 5.3% | 283 |
| Tharparkar | 12171 | 56.1% | 5.7% | 0.4% | 10.8% | 3.2% | 278 |
| Ziarat | 32221 | 67.7% | 5.0% | 0.0% | 6.1% | 5.2% | 267 |
| Poonch | 30405 | 57.5% | 8.3% | 1.2% | 7.8% | 7.9% | 285 |
| Overall % (all districts) | 24575 | 57.7% | 6.3% | 0.40% | 8.80% | 5.40% | 1398 |

The lowest monthly household expenditure, on average, was found to be in Tharparkar, which was around PKR 12,200/-. The fraction of household expenditures on various heads like food, clothing, health, education and insurance was also calculated. Overall, it was calculated that around 58% of the household expenditure went into food expenditure. This pattern was seen across districts, where it was found to be between 52% in Rawalpindi and 68% in Ziarat. As reported earlier, the prevalence of insurance was recorded to be very low, so the insurance premium formed a very tiny fraction of the expenditures.

The **ownership of assets** by the household can be a good estimate of the financial health, which in turn may be used for assessing the ability of household to buy insurance policy and pay premium afterwards. However, regularity of income stream might have to be in sharp focus so that households pay premiums in time regularly. The following table gives a district-wise analysis of assets owned by the household:

As evident from the table on the right, respondents from Tharparkar and Charsadda districts appear to have lesser household assets than those from other districts, though farming land for household consumption seems to be present in case of respondents from Tharparkar but absent in case of Charsadda. Respondents from Ziarat are in a relatively good asset holding position as they have reported ownership of farming land, cars, and motorcycle in greater proportions as compared to other districts.

Agriculture and Microinsurance

This section deals with the different agriculture related characteristics of households such as area under cultivation, main crops, and their net income from different crops.

Kinds of farming activities

Farming activities are important for not only household own consumption but for income generation as well.

Table 35: Ownership of Assets

| District | Ownership of assets (% of households within each district) | | | | | | | | |
|---------------------------------------|--|------------|-------|---------------------|------------|-------|------------------------------------|---------------------------------------|-------|
| | Refrigerator | Television | Radio | Computer/ Laptop | Motorcycle | Car | Farming land for HH consumption | Farming land for saleable products | Fan |
| Rawalpindi | 71.6% | 91.2% | 3.2% | 18.6% | 42.1% | 7.7% | 0.0% | 0.7% | 97.9% |
| Charsadda | 39.9% | 25.5% | 8.7% | 2.4% | 6.3% | 1.0% | 0.0% | 0.7% | 96.2% |
| Tharparkar | 1.1% | 3.5% | 5.0% | 0.4% | 4.6% | 0.7% | 24.1% | 11.0% | 29.8% |
| Ziarat | 62.2% | 66.5% | 32.0% | 2.9% | 58.5% | 22.2% | 36.7% | 37.8% | 95.6% |
| Poonch | 33.7% | 57.5% | 8.4% | 4.9% | 6.7% | 3.2% | 25.3% | 0.4% | 89.8% |
| Note: Multiple response answer | | | | | | | | | |

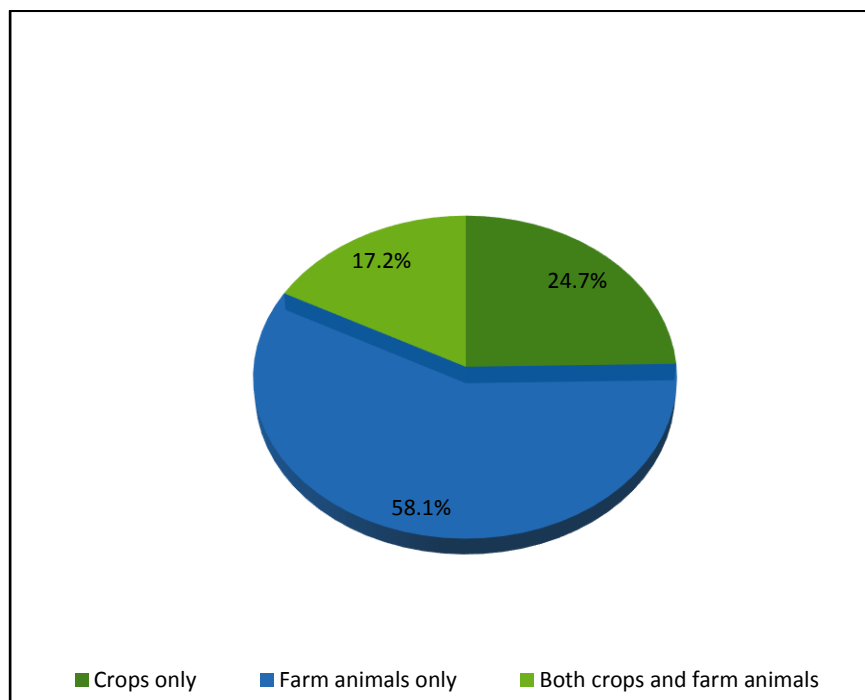


Figure 26: Kinds of Farming Activities

As can be seen in above figure, those households which do some kind of agriculture related activities, around 64% are engaged in cropping only, and another 23% keep farm animals only, while 11% reported both the activities.

Source of financing for farming activities

As far as the source for financing for the farming activities is concerned, most of the respondents (around 67%) responded that they financed these from their savings from the farming activities, themselves.

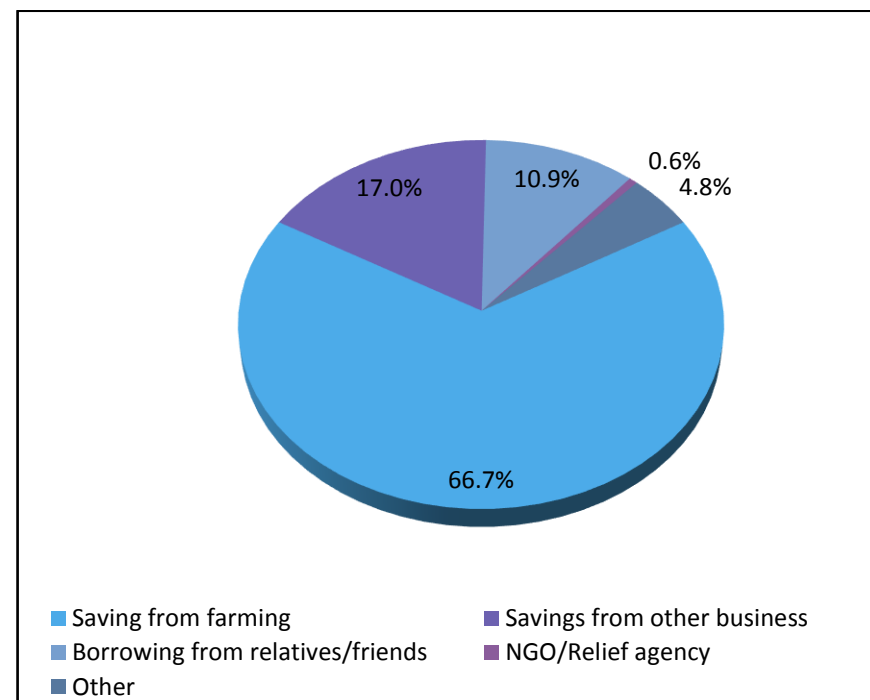


Figure 27: Financing of Farming Activities

On the other hand, 17% respondents used savings from other businesses for the purpose, as seen in the above figure. Around 11% borrowed money from relatives or friends for financing their farming activities.

Information/advice from agriculture extension officers

Around 42% of the respondents, who did some kind of farming activities, got information/ advice from extension officers.

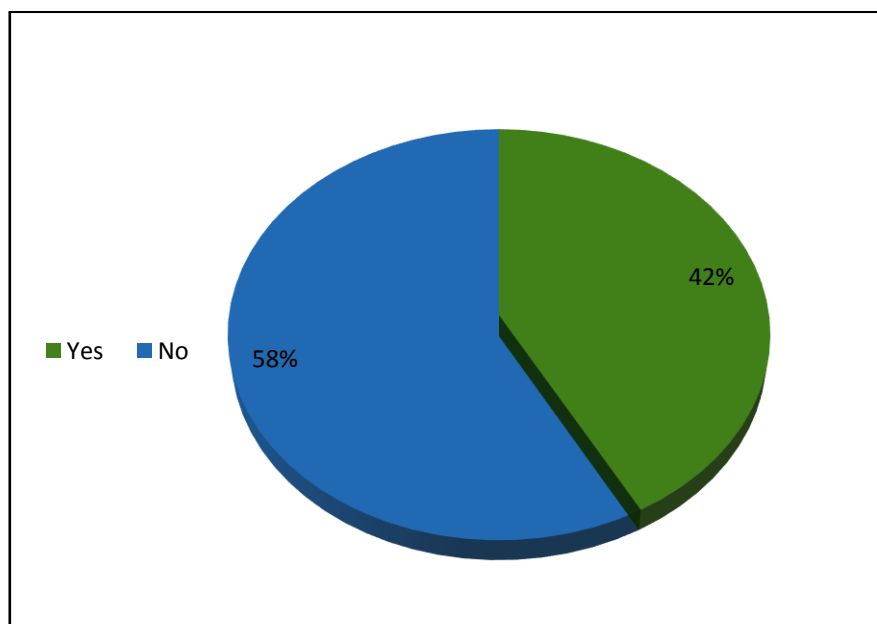


Figure 28: Information sought from Extension Officers

On the other hand, around 58% of the respondents do not get information/advice from extension officers.

Results also show that a wide majority of respondents did not get information about expected rainfall or expected temperature from the extension officers. The following figure shows the proportions of respondents.

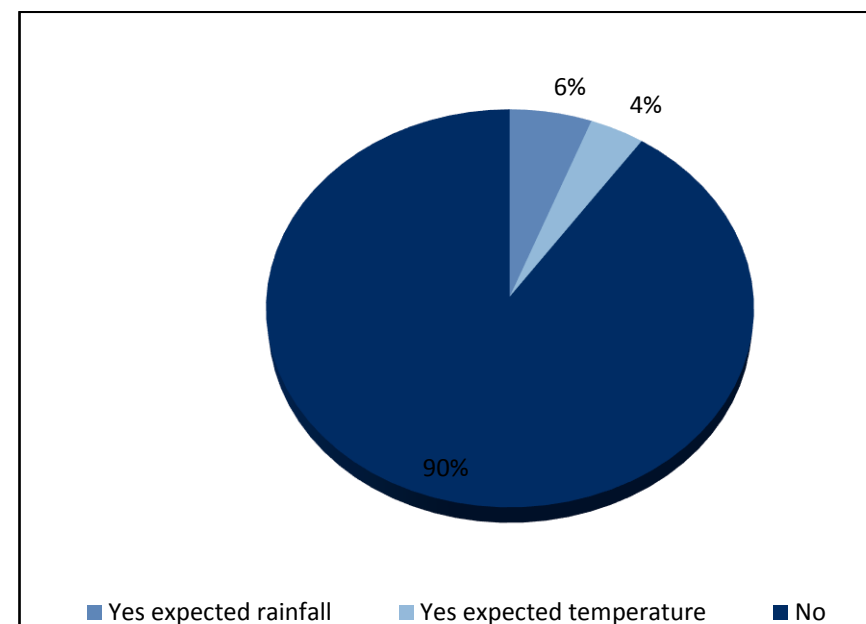


Figure 29: Information provision from Extension Officers

The results show that in the opinions of 90% of the respondents, they did not get such information from extension officers. And in case of 6% of the respondents they got information about expected rainfall, and in case of 4% of the respondents they got information about expected temperature.

Farmer-to-farmer extension is usually another source of information for farmers. However, as reported by respondents – around 48% of them did use this information channel, while 48% did not.

Net Income from crops, and value of animals/livestock

Net income from crops is calculated at the household level, and presented as average at the district level in the following figure.

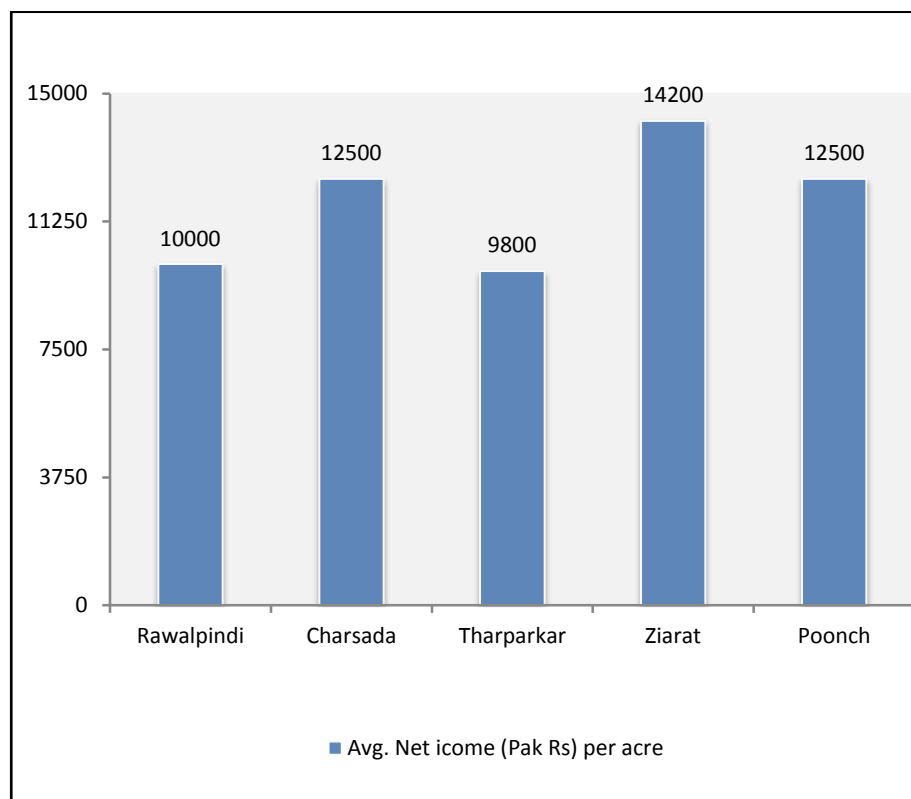


Figure 30: Net income of the households

In Ziarat the net income is calculated to be highest i.e. PKR 14,200/-, on average, as compared with other districts. In Rawalpindi, and Poonch it was estimated to be PKR 12,500/-, while it was around 10,000 in both, Rawalpindi and Tharparkar.

Estimated value of presently owned animals, and estimated value of animals owned in last 12 months is calculated at household level on the basis of respondents' opinions. The average is calculated for each district and is presented in the table on the right.

Table 36: Value of animals

| District | Avg. calculated value of presently owned animals | | Avg. calculated value of animals owned in last 12 months | |
|------------------|--|------------|--|------------|
| | PKR | Households | PKR | Households |
| Rawalpindi | 654,118 | 17 | 498,706 | 17 |
| Charsadda | 68,000 | 30 | 55,207 | 29 |
| Tharparkar | 26902 | 190 | 35,671 | 149 |
| Ziarat | 39570 | 53 | 59825 | 52 |
| Poonch | 146,263 | 46 | 98,876 | 45 |
| Overall average. | 80,485 | 336 | 78,611 | 292 |

The average is calculated only from those households which reported to own animals. Overall, the average value of presently owned animals was around PKR 80,500/-, and of those owned in last 12 months, it was around PKR 78,600/-.

District-wise analysis showed that in Rawalpindi, the estimated average value of presently owned livestock per household is relatively highest at around PKR 654,000/-. The estimated value of the same in last 12 months came up to be almost PKR 500,000/-. The estimated values of presently owned animals/livestock are lowest in Tharparkar i.e. around PKR 27,000/-, while it was PKR 35,700/- in previous 12 months. The pattern emerging from all districts is that estimated average value of animals/livestock at present is higher as compared with last 12 twelve months, except in Ziarat. In Ziarat, the value was higher in the last 12 months as compared with the situation now.

6. Promoting Resilience – Implementation Issues

The objective of the Demand Assessment was to assess demand for climate risk insurance in the country. The results highlighted climate change induced vulnerabilities of low-income group communities in both urban and rural areas of Pakistan. The main focus of the research was to analyze the needs of the low-income groups and their coping mechanism in case of weather related events.

It has emerged from the findings that there is an immense need to have proper coping mechanism for events related to climate change among low income groups in Pakistan to mitigate the adverse effects on their livelihoods because of climate related hazards.

There is undoubtedly demand for microinsurance in the country though there is a need for myth cracking awareness campaigns among masses. Religious perceptions and lack of trust on existing financial institutions are two main factors, which hinders the demand for microinsurance. Overall, banking is also limited in Pakistan together with a very low percentage of people engaged with insurance policies.



¹² This section on fund design is not developed by IMPACT consulting, nor was it part of the Demand Assessment questionnaire. MCII may provide further details.

The findings have highlighted a range of current coping mechanisms to mitigate the effects of climate change. However there is implicit demand for climate risk insurance in Pakistan. It is evident from the research that there is demand for microinsurance and it seems like this demand may increase manifold with extended opportunities to match respondents' expectations and Willingness-to-Pay.

Implementation process needs to be designed to cater the specific needs of low income groups engaged in agriculture related livelihood. The microinsurance products ideally are user-friendly and less complex as compared to regular financial products. It is also pertinent to cater the issue of trust and religious myths while introducing microinsurance products. Along with social and philanthropic elements associated with microinsurance, there is also a huge potential market which can open new economic avenues for the micro-financial institutions in Pakistan.

7. Suggestions and Recommendations for Fund Design¹²

Based on the global best practices and local needs and circumstances, there are four elements of fund design which are listed below:

Fund Entity which can make insurance payouts when a hazard occurs. The financial investments (reserves and equity) held by the fund to be managed by a fund manager. There can be 5 possible options for the Fund Entity:

Option 1: The fund can be registered as an insurance company.

Option 2: The fund can also be set up as a trust.

Option 3: The fund can also be set up as a statutory corporation by an act of the Parliament.

Option 4: The fund can also be registered offshore as either an insurance company or reinsurance company.

Option 5: The fund can also be set up as a not-for-profit organization, incorporated and registered under Section 42 of the Companies Ordinance.

To ensure the long-term sustainability of the fund, it is proposed to have a strong governance structure to safeguard it from the misuse of funds and also keep it outside the political pressure.

It is recommended to have a solid corporate structure which complies with the code of corporate governance designed in order to maximize disclosure and transparency for shareholders and stakeholders. Some successful Section 42 companies with strong governance structures, like the Pakistan Poverty Alleviation Fund (PPAF) are already functioning in the country.

Capitalization of the fund through sources selected by NDMA and the Pakistan government (may be Pakistan public or private resources, bilateral or international donations, etc.). The fund is financially supported by Multiple Donors and Equity Sponsors, both components provide the seed capital. The National Disaster Insurance Fund should have an adequate level of capitalization to cover the start-up cost, administrative cost, recurrent events reserve, reinsurance cost, provision for outstanding losses and sufficient level of catastrophic reserves according to international actuarial practices.

Options for fund capitalization are the various sources of possible finance: The fund can be capitalized by various entities like the local and international donors, local philanthropists and a certain fixed percentage of the provincial and federal government development budgets to ensure a constant revenue stream so that the resources do not dry up quickly. The donors' pool can provide the seed capital to the fund to support the government effort in developing a sustainable fund.

The capitalization based on the donors support, the cash flow from annual premiums, sound investment returns, prudent risk reduction measures and well diversified portfolio of policy holders, should rebound in a lower claims experience. The proceeds generated by this strategy can boost the accretion reserves, gradually developing a stronger solid base for the long-term sustainability of the fund.

Global experience shows that subsidies are very difficult to phase out because the low-income people become more and more reliant on them and start looking at them as a matter of right. This also increases the moral hazard in most government programmes unless some incentives and conditions are built into the premium subsidy.

Distribution channels that can make the insurance payouts to the beneficiaries in a timely and effective way. The fund channels insurance payouts to beneficiaries, through two components, the distribution channel (for example BISP) and payment providers (for example, banking network branch or ATM, among others).

The selection of the right delivery channels is the key to the success of this programme. This

fund is being set up to provide insurance to the chronic low-income and the transitory low-income. For the chronic low-income, BISP can be used as the most appropriate delivery channel because these people are also the recipients of monthly cash transfers, life insurance and other related benefits through the network of BISP. This provides a cost-effective opportunity for the fund to utilize the unique infrastructure and distribution channels BISP has already established to reach the chronic low-income.

For the transitory low-income, Pakistan Microfinance Network (PMN) can be used as a suitable delivery channel because the Micro Finance Banks (MFBs), the Microfinance Institutions (MFIs) are already providing small loans to transitory low-income through these networks. Almost all the loans disbursed by them are being bundled with Credit Life Insurance, which is mandatory to qualify for the loan. It is our recommendation that disaster insurance products could also be bundled with these loans. As that will make the loans more expensive, the Fund could support the insurance premium but the subsidy amount can be a little lower than the subsidy for the chronic low-income. This would also cross subsidize the significant support already in place for the chronic low-income and generate some premium income for the Fund, thereby reducing financial pressure.

The second option can be that the fund sets up an independent low cost Third Party Administrator (TPA) with state of the art technological solutions leading to more transparency and speedier transactions. This could be done where appropriate with the involvement of additional networks like the National Rural Support Programme (NRSP) that have extensive local networks to serve the transitory low-income throughout Pakistan. Each option has its own pros and cons and a detailed cost and benefit analysis will have to be conducted to arrive at the right decision.

Preliminary Conclusions

While a detailed discussion of the policy and process implications of the Demand Assessment are presented in the report on Fund design, and as such are out of the purview of this document, some pertinent, initial conclusions are presented below.

- The Fund will be established by NDMA to serve the needs of low-income, vulnerable communities. Due to the (high) incidence of poverty, policy holders will be in need of support to get insurance cover, so government subsidies will play a critical role in ensuring the success of the National Disaster Insurance programme.
- Distribution channels, aggregators must be able to make insurance payouts to the

beneficiaries in a timely and effective way. The selection of the right delivery channels is the key to the success of this programme. This fund is being set up to provide insurance to the chronic low-income and the transitory low-income.

- For the chronic low-income, we recommend BISP as the most appropriate delivery channel because these people are also the recipients of monthly cash transfers, life insurance and other related benefits through the network of BISP. This provides a cost-effective opportunity for the fund to utilize the unique infrastructure and distribution channels BISP has already established to reach the chronic low-income.
- Our estimates put the potential number of beneficiaries that could be served by the Fund at 246,000 in the five study areas. However, the actual number of beneficiaries will be determined by two factors: a) the outreach the government wants or is able to cover, which in turn is decided by the resources available; b) the number of the transitory low-income and the chronic low-income in each district.
- Low insurance penetration is a result of low awareness of insurance and low income levels in the five study areas. Therefore concerted efforts have to be put into client education and awareness raising, as well developing alternative distribution mechanisms such as bundling insurance with loans in the case of the transitory low-income.
- Coping strategies such as doing nothing, relying on savings, borrowing from friends and family, taking credit at high interest rates, distressed sale of productive assets, etc., employed by the target population all lead to deeper poverty in the long term. By providing vulnerable individuals with risk transfer mechanisms such as climate risk insurance, the social resilience of at-risk individuals can increase over time.

8. Annexures

Annex I - Purpose of a National Disaster Insurance Fund in Pakistan

There are many national disaster funds in the world, and there are even more examples of insurance approaches designed to reach the most vulnerable people. However, there is no national fund established to serve the most vulnerable people— Pakistan's endeavour would be the first of its kind worldwide for natural hazard risks. In consultation with NDMA, the main purpose for the Fund could be to set up an effective and transparent mechanism with streamlined distribution channels and adequate funds in place before the disaster strikes so that the money reaches the beneficiaries in the shortest possible time. NDMA outlined that the target beneficiaries could be the chronic low-income and transitory low-income of Pakistan that are exposed to natural hazards.

In consultation with NDMA and national stakeholders in Pakistan, the aim of a National Disaster Insurance Fund could be threefold:

- Appropriate for NDMA: to design a fund which is in line with the NDMA's objectives, mandate, and capacity
- Appropriate for intended beneficiaries: to design a fund that fits the specific needs of the chronic and the transitory low-income living in vulnerable communities in Pakistan
- Financially viable and sustainable fund: This means that the fund is compliant with the regulatory framework in Pakistan and is based upon the country's diverse climatic patterns, risk exposure and its socio-economic, cultural, political and geographical factors.

Approach

To understand what design options for a National Disaster Insurance Fund could fulfil these three aims, a Pakistani-led team of experts coordinated by the Munich Climate Insurance Initiative (MCII) and supported by the Climate Development and Knowledge Network (CDKN) undertook three activities: A review of existing data, knowledge, and approaches in Pakistan on the management of natural hazard risks; a review of existing national insurance funds worldwide; and an extensive stakeholder dialogue in Pakistan. Results of review of existing data in Pakistan on hazard management Adequate information (e.g., hazard maps and probabilities, exposure and vulnerability data including property types or assets and damage

curves) is critical for deriving premiums and ensuring the viability of the Fund. Such data requires specific probabilistic and quantitative risk studies which are able to capture economic risk through probable maximum losses, average annual losses or loss exceedance curves. In addition, periodically re-assessing individual and total cumulative risks (e.g., changes in exposure and total premiums to be paid) is compulsory for a sustainable insurance scheme.

While considerable efforts have been made to develop hazard monitoring networks and to consolidate hazard, exposure and vulnerability information from different data sources and technical agencies, the resulting risk assessment efforts have mostly focused on identifying hazards and consequences while failing to assess the relative significance of risks. Ongoing initiatives aim to bridge this gap by developing methodologies and information platforms at the micro level, but such efforts appear fragmented and uncoordinated at the national level.

Challenges

- The size of the vulnerable population in the country is very high and can be roughly estimated to be around 100 million out of which approximately 20-22% are BPL)
- Keeping in view the negligible purchasing power of the chronic low-income, the premium will have to be heavily subsidized demanding a constant revenue stream from the fund.
- The population growth rate measured at 1.8% in 2011 is one of the highest in the world and is projected to double by the year 2050. This is likely to increase the number of vulnerable population in the years to come.
- The economy has been in a state of recession and the government's internal and external debt is mounting every year and crossed PKR 14 trillion in 2013. This may cause financial constraints in building up adequate catastrophic reserves in the Fund.
- The current rate of inflation as in March 2014 is 8.53%. This will further reduce the purchasing power of the vulnerable population.
- Pakistan has been categorized as an extremely climate sensitive country becoming increasingly vulnerable to natural disasters.
- Local involvement and buy-in can be a key challenge for the fund. Despite the project sponsors' best intentions, it may be perceived as a "Western" initiative and undertaking. That perception is usually coupled with an expectation of free-flowing financial aid.
- Pakistan is beset with not only poverty but a pervasive suspicion of the West, fundamentalism, ethnic and sectarian conflicts. Significant pockets of it will remain

hostile and inaccessible to any interventions that are not seen as being in line with the prevailing tenets of Islam and the Sharia law. The concept of insurance would be unwelcome in these areas.

Even in many communities that may not be antagonistically conservative, filling the gender gap would be an uphill undertaking. Encouraging women to get involved could be seen as leading them astray from Islam.

Opportunities

Pakistan's social, communication and technological landscape has gone through a remarkable phase of development during the last few years and has now evolved to a level where it presents the ideal opportunity for building up complex and multiple partnerships for extended outreach and scalability of disaster microinsurance. The MFBs, MFIs and NGOs have huge networks and are well entrenched even in the remote areas of the country. Deploying them as delivery channels will yield excellent results as they already enjoy the trust and confidence of the local communities.

Our recommendation to leverage, utilize and piggy back on the existing channel and infrastructure of BISP for providing insurance to the chronic low-income will create cost efficiency, transparency and speed.

We recommend using Pakistan Microfinance Network (PMN) to reach the transitory low-income and link their insurance to small loans. The premium subsidy can be reduced to a minimum or removed altogether, thus cross subsidizing the premium cost of the chronic low-income, thereby releasing the financial pressure on the fund.

The excellent data base of NADRA—in particular the national identity cards and the digitalization of this personalized data-- and the Poverty Score Card exercise will enable easy identification of beneficiaries thereby achieving cost efficiency, speed and transparency in reaching out to the vulnerable populations.

The country has also witnessed the growth of branchless banking like EasyPaisa, UBL Omni, Mobicash, Timepay, Watan Cards etc at a breath taking speed, thus creating a dense network to act as the potential delivery channels for a seamless payment and collection mechanism. We feel that the timing is just right to exploit these existing networks and roll out a world class insurance strategy.

The main benefit of the Fund would be that an effective and transparent mechanism with streamlined distribution channels and adequate funds would be in place before the disaster strikes so that the money reaches the beneficiaries in the shortest possible time.

Although the private insurance sector appears reluctant to commit their involvement at this stage, however, the public sector entities, NICL and PRCL are keen to participate in the fund as the underwriter and reinsurer respectively. The Insurance Regulator, SECP has also assured us of their support.

Currently there are 5 Takaful operators functioning in Pakistan. They can be deployed to write Shariah compliant products for those people who perceive conventional insurance as un-Islamic. Results of review of other national funds worldwide. A comprehensive review of the Risk Financing Schemes currently used in different regions of the world was conducted with the intention of learning from international good practices and their relevance to the Pakistani context.

Design considerations for a National Disaster Insurance Fund designed to benefit the chronic and the transitory low-income in Pakistan. According to international experience the core components of all funds are the same. The four major elements of funds, as observed worldwide, are:

- Fund Entity which can make insurance payouts when a hazard occurs. The financial investments (reserves and equity) held by the fund are managed by a fund manager
- Capitalization of the fund through sources selected by NDMA and the Pakistan government (may be Pakistan public or private resources, bilateral or international donations, etc.). The fund is financially supported by Multiple Donors and Equity Sponsors, both components provides the seed capital
- Distribution channels that can make the insurance payouts to the beneficiaries in a timely and effective way. The fund finance insurance payouts to financial beneficiaries, through two components, the distribution channel (for example BISP) and payment providers (for example, banking network branch or ATM, among others).
- Financial back-up for the Fund to ensure financial stability / viability (risk layering including primary and reinsurance). The fund will face insurance policies commitments, first with its own capital base (seed capital & reserves), second through international reinsurance support. Considering the Pakistani context, found three options were found to support the proposed fund by reinsurance capacity. .

- However there are many variations within these components. Accordingly we have suggested several options for these components. As the viability of the Fund is the topmost priority for NDMA, therefore the proposed Fund's legal and institutional structure has been designed to ensure that the fund has the inherent strength to sustain itself in the future. A mechanism has been devised to gradually ease out the financial burden on the fund to make it self-sustainable and less reliant on donors.

The Four Elements of a National Disaster Insurance Fund for Pakistan

Under each of these four elements listed above, several options exist for NDMA to choose from in designing a National Disaster Insurance Fund for Pakistan. We recommend the following measures to ensure the long term viability of the Fund:

Fund which can make insurance payouts when a hazard occurs

The report suggests 5 possible options for the Fund Entity: The fund can have various structures:

Option 1: The fund can be registered as an insurance company

Option 2: The fund can also be set up as a trust

Option 3. The fund can also be set up as a statutory corporation by an act of the Parliament.

Option 4: The fund can also be registered offshore as either an insurance company or reinsurance company.

Option 5: The fund can also be set up as a not-for-profit organization, incorporated and registered under Section 42 of the Companies Ordinance. The two options deemed most promising are a registered offshore company (special purpose vehicle) or a not-for-profit company. Both of these proposed legal structures have tax advantages, provide transparent governance, and other benefits to a Fund. To ensure the long term sustainability of the fund, we have proposed a strong governance structure to safeguard it from the misuse of funds and also keep it outside the political pressure.

We have recommended a solid corporate structure which complies with the code of corporate governance designed in order to maximize disclosure and transparency for shareholders and stakeholders. Some successful section 42 companies with strong governance structures, like the Pakistan Poverty Alleviation Fund (PPAF) are already functioning in the country. One step beyond this would be to set up an offshore Special Purpose Vehicle (SPV) in a tax haven like Bermuda or Cayman Islands to enjoy maximum tax exemptions and keep it completely away from political interference. Capitalization of the Fund The National Disaster Insurance Fund

should have an adequate level of capitalization to cover the start-up cost; administrative cost; recurrent events reserve; reinsurance cost; provision for outstanding losses and sufficient level of catastrophic reserves according to international actuarial practices.

Options for fund capitalization are the various sources of possible finance: The fund can be capitalized by various entities like the local and international donors, local philanthropists and a certain fixed percentage of the provincial and federal government development budgets to ensure a constant revenue stream so that the resources do not dry up quickly. The donors' pool can provide the seed capital to the fund to support the government effort in developing a sustainable fund.

The capitalization based on the donors support, the cash flow from annual premiums, sound investment returns, prudent risk reduction measures and well diversified portfolio of policy holders, should rebound in a lower claims experience. The proceeds generated by this strategy can boost the accretion reserves, gradually developing a stronger solid base for the long term sustainability of the fund.

A few points on premium support: Global experience shows that subsidies are very difficult to phase out because the low-income people become more and more reliant on them and start looking at them as a matter of right. This also increases the moral hazard in most government programmes unless some incentives and conditionality's are built into the premium subsidy. For example, the low-income people who adopt some risk mitigation measures can be made eligible for more subsidies and vice versa. The chronic low-income who cannot even make a token premium contribution can pay for it by working for Disaster Risk Reduction programmes. Similarly the premium rate can be reduced for those middle and low income people who take risk improvement steps. Pragmatic steps like these can enable the Fund to gradually reduce the subsidy levels and also reduce the risk exposure ensuring its sustainability.

Distribution channels & aggregators that can make the insurance payouts to the beneficiaries in a timely and effective way

The selection of the right delivery channels is the key to the success of this programme. This fund is being set up to provide insurance to the chronic low-income and the transitory low-income

For the chronic low-income, we recommend BISP as the most appropriate delivery channel because these people are also the recipients of monthly cash transfers, life insurance and other related benefits through the network of BISP. This provides a cost-effective opportunity for the fund to utilize the unique infrastructure and distribution channels BISP has already established to reach the chronic low-income.

For the transitory low-income, we recommend Pakistan Microfinance Network (PMN) as a suitable delivery channel because the Micro Finance Banks (MFBs), the Microfinance Institutions (MFIs) are already providing small loans to transitory low-income through these networks. Almost all the loans disbursed by them are being bundled with Credit Life Insurance, which is mandatory to qualify for the loan. It is our recommendation that disaster insurance products could also be bundled with these loans. As that will make the loans more expensive, the Fund could support the insurance premium but the subsidy amount can be a little lower than the subsidy for the chronic low-income. This would also cross subsidize the significant support already in place for the chronic low-income and generate some premium income for the Fund, thereby reducing financial pressure.

The second option can be that the fund sets up an independent low cost Third Party Administrator (TPA) with state of the art technological solutions leading to more transparency and speedier transactions. This could be done where appropriate with the involvement of additional networks like the National Rural Support Programme (NRSP) that have extensive local networks to serve the transitory low-income throughout Pakistan. Each option has its own pros and cons and a detailed cost and benefit analysis will have to be conducted to arrive at the right decision.

Financial back-up for the Fund to ensure financial stability / viability (risk layering including primary and reinsurance). The fund can have various financial back-up strategies. The report suggests 5 possible options for the Fund Entity:

Option 1: The fund bypasses the domestic insurance industry and approaches the international reinsurance market directly through a foreign broker.

Option 2: The fund contracts with NICL which acts as the fronting underwriter and reinsures with PRCL which retains some risk itself and off loads the remaining to the international reinsurance market as well as the capital markets for a wider diversification of the risk.

Option 3: The fund bypasses NICL and contracts directly with PRCL which then contracts with the international reinsurance market. Two additional variations can be considered if the

fund is incorporated as an offshore entity (see options for the structure of the fund above).

Option 4: The fund is incorporated offshore as an insurer and directly, but remotely, issues policies to the final beneficiaries and retransfers the risk to the international reinsurance market.

Option 5: The fund is incorporated as a reinsurer offshore and issues policies through a local fronting insurance company and retrocedes the risk first to itself and then onto the international reinsurance market. Each of these options has trade-offs, a primary one being the involvement of the Pakistan private and public insurance industry as key stakeholders and the cost of passing along risk to the international reinsurance and capital markets. If NICL and PRCL both had appetite to participate, Option 2 would be a suitable way to build buy-in and participation among the Pakistan market. Options 4 and 5 can be combined with Options 2 and 3.

Next steps: Will the Fund be viable and sustainable?

Before embarking on a Fund set up, NDMA will want to know what the size of the Fund could be, and whether such a fund will be viable and sustainable in the long term. The viability of a Fund as outlined in this report could be explored in a next phase of work which NDMA could undertake in the near term.

The basic information required to determine the size of the Fund would include a variety of costs and strategic decisions (start-up cost, fixed administrative cost, recurrent events reserves, reinsurance cost, provision for outstanding losses, catastrophic reserves, number of beneficiaries, premium subsidy, scope of insurance cover, risk exposure and level of potential payouts).

To determine these costs and gather the information necessary to make strategic decisions about the size of the Fund, a key set of questions will require exploration to determine whether the fund will be viable and sustainable once it has been established. This section reflects on the process for setting up a viable fund, including a set of questions that would need to be explored to know whether the fund would be viable.

The major elements of the Fund design discussed in this chapter, along with the associated options for each element, imply four necessary steps before the fund and its underlying insurance structure is operational. The Chart below sketches these four steps:

- The first step involves the design and preparation of the risk assessment of the assets, beneficiaries and hazards to be insured.
- The second step entails the structuring of the risk financing strategy based on the results of the risk assessment. The definition of the trigger structure, for instance, is one of the key elements to define in this stage.
- The third step requires the layering of different levels of risk retention, the optimal level of risk transferring, and the type of schemes to be implemented.
- Finally, step four involves the development of the essential legal formalities, by creating contracts and legal procedures to support the strategies involved. Final thoughts By spreading losses among people and across time, insurance reduces the catastrophic impact of disasters, and enables a timely recovery. By reducing the burden of loss and damage, insurance approaches can be coupled with other disaster risk management to soften the impacts of catastrophic events on vulnerable communities. In addition to providing timely capital after a disaster, insurance can and should be linked with risk reducing, preventive activities. Prudently employing a combination of insurance measures with risk reduction, including, among other measures, early warning, education, infrastructure strengthening, and land-use regulations, can greatly reduce the immediate losses and long-term development setbacks from disasters. In addition, by creating a secure investment environment, insurance instruments can enable productive risk taking on the part of individuals and governments, and in this way reduce disaster-induced poverty traps.

Insurance for natural hazards, however, is not affordable or even available to many in the most vulnerable communities in Pakistan.

The undertaking of the National Disaster Management Authority to explore a possible National Disaster Insurance Fund is groundbreaking in two ways: Worldwide many funds exist to deal with the negative impacts of hazards on governments and wealthier, asset-owning portions of society. Worldwide there are also scores of micro- insurance approaches (many at a small scale) to reach out to vulnerable communities. But nowhere in the world has a government—particularly the size of a country like Pakistan—undertaken such an ambitious course to explore the design and viability of a national fund designed to help the most vulnerable communities better manage natural hazards. Should Pakistan move forward in this endeavour, it will face

challenges and also provide leadership and innovative vision in addressing some of the most acute, and often invisible, challenges of protecting vulnerable people from the risks of natural hazards?

Annex II - Sampling Methodology

Universe

Universe of this study comprised five districts taken from, Punjab, Sindh, Khyber Pakhtunkhwa (KP) and Balochistan provinces and Azad Jammu and Kashmir state. The cantonments and militarily restricted areas of these districts are out of scope of the study. The following 5 districts have been selected by MCCL in consultation with NDMA and other stakeholders. The list of districts selected for the Demand Assessment are as under:

Table 37: List of Districts

| Sr.NO. | District | Population |
|--------|--------------|------------|
| 1 | Poonch | 573,000 |
| 2 | Charsadda | 1,359,000 |
| 3 | Ziarat | 45,000 |
| 4 | Tharparkar | 1,177,000 |
| 5 | Bahawalnagar | 2,617,000 |

Sampling Frame

IMPACT Research and Training (SMC-Private) Ltd will use multistage sampling technique with systematic random sampling.

Stage 1: Five districts will be selected based on their susceptibility to extreme weather condition.

Stage 2: List of union councils having information about number of villages in rural areas and number of wards/blocks in urban areas prepared by provincial local government and rural development department will be considered as sampling frame. In urban areas, each union council is comprised of a number of wards of average size 300-400 households with detail boundary description.

Stage 3: The record of each ward with well-defined map and other identification particulars is available in Union Council office. The number of households in respect of each village/ward will be used for as measure of size for sample selection.

Stage 4: After the random draw of wards/village, with proportion to size from each district, enumeration will be carried out in selected areas using the right hand rule.

Sample Size and Allocation

Sample size is selected by using sample selection calculator, under the assumption as:-

- Margin of error: 7% (if margin of error is reduced, the sample size will increase. At 5% it reaches around 385)
- Level of confidence: 95%
- Response distribution: 50%

Table 38: Sample Size

| S.NO. | District | Population | Sample | 10% for non-response/errors | Total case load |
|-------------------------|--------------|------------|--------|-----------------------------|-----------------|
| 1 | Poonch | 573,000 | 196 | 20 | 216 |
| 2 | Charsadda | 1,359,000 | 196 | 20 | 216 |
| 3 | Ziarat | 45,000 | 196 | 20 | 216 |
| 4 | Tharparkar | 1,177,000 | 196 | 20 | 216 |
| 5 | Bahawalnagar | 2,617,000 | 196 | 20 | 216 |
| Total acceptable sample | | | | | 980 |

Annex III - List of Communities in the selected districts

Rawalpindi

1. Katarian
2. Ameen Town
3. Pirwadhai
4. Dhouk Najou
5. Awan Market
6. Khayaban e Sirsyed
7. Mohammadi colony

Tharparkar

1. Mithi
2. Bhakuo
3. Mohrano
4. Kaloi
5. Dabhro
6. Bhitro
7. Sobhiar
8. Khetlari
9. Bolhari
10. Diplo

Charsaddah

1. Qazi Khel
2. Mirzagan
3. Painsda Kheil
4. Bossa Khail
5. Bagh Kuraona
6. Musat Khail
7. Harbella Korona
8. Shabra
9. Sey Pao
10. Lasara

11. Yasin Zai
12. Tarnab
13. Sham Sudin Kurana
14. Gedar Kali
15. Sheikh Kali
16. Aagra
17. Tangi
18. Zyarat Korona
19. Nusrat Zai

Poonch

1. Pagwati
2. Dwarandi
3. Abbas Pura
4. Tain
5. Mang
6. Thorat
7. Paalgram

Ziarat

1. Kach
2. Warcham
3. Kawas Sharki
4. Zaranda
5. Kawas Gharbi
6. Wam
7. Kan Depo
8. Sandeman
9. Tangai
10. Gherat Mina
11. Ziarat Bazaar
12. Pitao
13. Sparer ragh
14. Dargai
15. Makra

16. Panzadi
17. Zargi
18. Sanjwai bazar
19. Sari
20. Pachai
21. Raber
22. Chotair
23. Ghabang
24. Tanobai
25. Loiragha
26. Zarzari
27. Chakor tangi

Annex IV – Training Report

Background

The Munich Climate Insurance Initiative (MCII) along with its consortium partner Climate and Development Knowledge Network (CDKN) is engaged with National Disaster Management Authority (NDMA) to assess demand for microinsurance through household survey. IMPACT Research and Training has been awarded the task to carry out the survey at five districts of Pakistan namely Rawalpindi (Punjab), Poonch (Azad Jammu and Kashmir), Charsaddah (Khyber Pakhoonkhua), Ziarat (Balochistan) and Tharparkar (Sindh).

Demand Assessment Teams

The Demand Assessment is planned with three teams:

Field Team: comprising of enumerators and supervisors, based in the same districts, fluent in local dialects.

Monitoring Team: Development experts with extensive experience of surveys to supervise the field team

Management Team: is responsible for smooth coordination to facilitate logistics for survey

Training

Training of enumerators was organized on 18th and 19th August 2015, in Islamabad. All enumerators and supervisors attended the training along with members of monitoring team.

It was an opportunity for enumerators to learn not only about Demand Assessment methods but also about basic concepts of climate change and microinsurance.

Session One: Guidelines for Supervisors and Enumerators

Participants were briefed on standard operating procedures and research ethics including professionalism, efficiency and confidentiality. Some requirements and precautions were explained:

- Head of the household to be consulted
- Can not change sequence of questions/sections
- Enumerators to start with introduction
- Can not hand over questionnaire to respondent
- Only use specific/give text for asking questions and taking answers. Do not interpret or elaborate in your own words
- Do not give any 'clue' to respondents for any question

Session Two: Introduction to Climate Change and Microinsurance

In order to understand the context of the Demand Assessment, enumerators were briefed about climate change and microinsurance. Interactive sessions led to interesting discussions with examples from their areas related to changes in weather conditions. Some were familiar with the concept of insurance but microinsurance was altogether a new concept for most of the enumerators.

Climate Change

- Changes in the earth's weather, including changes in temperature, wind patterns and rainfall, especially the increase in the temperature of the earth's atmosphere that is caused by the increase of particular gases, especially carbon dioxide.
- Climate change is a long-term change in the statistical distribution of weather patterns
- over periods of time that range from decades to millions of years.
- It may be a change in the average weather conditions
- or a change in the distribution of weather events with respect to an average, for example, greater or fewer extreme weather events



Impact of Climate Change

- Rise in temperature
- Sea level rise
- Decrease in snow/ice covers/ glaciers
- Changes in rainfall patterns
- Changes in growing seasons
- Floods, droughts and heat waves

Insurance

- A practice or arrangement by which a company or government agency provides a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a premium.
- A contract (policy) in which an individual or entity receives financial protection or reimbursement against losses from an insurance company. The company pools clients' risks to make payments more affordable for the insured.

- A means of guaranteeing protection or safety

Microinsurance

- Microinsurance is the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved
- Insurance products that offer coverage to low-income households. A microinsurance plan provides protection to individuals who have little savings and is tailored specifically for lower valued assets and compensation for illness, injury or death.

Why Microinsurance

Low-income income persons live in a risky environments, faced many types of risks, such as

- Accidental death and disability
- Loss of property due to theft or some other uncertain reasons
- Agricultural losses and
- Other losses due to disasters

Both poverty and vulnerability underpin each other in a way that they accelerate their impact on household. These risks along with financial losses also create a situation of uncertainty



Session Three: Demand Assessment Instrument Sessions

Each section of instrument was explained in detail with probing questions from participants. Some of the questions were amended in light of extensive discussions with the enumerators and supervisors. Some of the amendments are as follows:

- Response options were added to section 4, question number 13 which is about insurance premium.
- There was a concern among participants that female headed households may not like to give mobile number. In that case option of landline number and/or national identity card number can be written.
- Time frame given in section 3-A and section 5.
- Section 13, question 1 about rooms in the household was changed to rooms excluding kitchen and toilets



Session Four: Micro Plans

Satellite images and list of districts were provided to participants which was elaborated in detailed discussions keeping in mind different factors of Demand Assessment design. District teams listed down areas and dates in their micro plans. List is appended below.



Rawalpindi

- i. Katarian
- ii. Ameen Town
- iii. Pirwadhai
- iv. Dhouk Najou
- v. Awan Market
- vi. Khayaban e Sirsyed
- vii. Mohammadi colony

Tharparkar

- i. Mithi
- ii. Bhakuo
- iii. Mohrano
- iv. Kaloi
- v. Dabhro
- vi. Bhitaro
- vii. Sobhiar
- viii. Khetlari
- ix. Bolhari
- x. Diplo

Charsadda

- i. Qazi Khel
- ii. Mirzagan
- iii. Paimda Kheil
- iv. Bossa Khail
- v. Bagh Kuraona
- vi. Musat Khail
- vii. Harbella Korona
- viii. Shabra
- ix. Sey Pao
- x. Lasara
- xi. Yasin Zai
- xii. Tarnab
- xiii. Sham Sudin Kurana
- xiv. Gedar Kali
- xv. Sheikh Kali
- xvi. Aagra
- xvii. Tangi
- xviii. Zyarat Korona
- xix. Nusrat Zai

Poonch

- i. Pagwati
- ii. Dwarandi
- iii. Abbas Pura
- iv. Tain
- v. Mang
- vi. Thorat
- vii. Paalgram

Ziarat

- i. Kach
- ii. Warcham
- iii. Kawas Sharki
- iv. Zaranda
- v. Kawas Gharbi
- vi. Wam
- vii. Kan Depo
- viii. Sandeman
- ix. Tangai
- x. Gherat Mina
- xi. Ziarat Bazaar
- xii. Pitao
- xiii. Sparer ragh
- xiv. Dargai
- xv. Makra
- xvi. Panzadi
- xvii. Zargi
- xviii. Sanjwai bazar
- xix. Sari
- xx. Pachai
- xxi. Raber
- xxii. Chotair
- xxiii. Ghabang
- xxiv. Tanobai

- xxv. Loiragha
- xxvi. Zarzari
- xxvii. Chakor tangi

Mock Session

Second day of the training was spent mainly on mock interviews. Enumerators were divided into ten teams for mock interviews with one another to enhance understanding of the questionnaire and Demand Assessment methods.

List of enumerators

Charsadda

- 1. Faqir Hassan
- 2. Saifullah Khan
- 3. Shazia Naz
- 4. Adil Ali Adil

Poonch

- 1. Amtl Fatima
- 2. Sherren Akhtar
- 3. Qasim Nazar
- 4. Mohammad Ishaq

Rawalpindi

- 1. Bilal Virk
- 2. Mohammad Irfan
- 3. Mohammad Sohaib
- 4. Farhat

Ziarat

- 1. Aalia Khan
- 2. Gulzar Khan
- 3. Umar Zaman
- 4. Mansoor Khan

Tharparkar

- 1. Ghulam Rasool

- 2. Arif Hussain
- 3. Nasreen Qamrbani
- 4. Kulsoom Sindhu



Annex V - Sources of information about extreme weather conditions

Table 39: Sources of information about extreme weather conditions

| | Television | Radio | Neighbors | Shopkeepers | Colleagues | Family-Members | None | Others | N |
|-----------------------------------|-------------|------------|-------------|-------------|------------|----------------|-------------|------------|-------------|
| District | % | % | % | % | % | % | % | % | |
| Rawalpindi | 91.2 | .1 | 2.1 | .3 | .5 | 2.4 | 3.0 | .7 | 1177 |
| Charsadda | 27.1 | 8.8 | 3.5 | .6 | 1.1 | 16.7 | 41.2 | 2.1 | 839 |
| Tharparkar | 10.0 | 7.6 | 63.6 | 39.7 | 34.4 | 38.6 | 0.0 | 1.1 | 648 |
| Ziarat | 30.8 | 2.3 | 14.5 | 5.8 | 2.6 | 3.0 | 38.9 | 2.1 | 532 |
| Poonch | 34.5 | 2.2 | 5.4 | 1.0 | 6.1 | 6.9 | 51.7 | 0.0 | 1127 |
| Total | 44.4 | 3.7 | 14.0 | 7.1 | 7.4 | 11.8 | 27.1 | 1.0 | 4323 |
| Multiple response variable | | | | | | | | | |

Annex VI - District-wise Distribution of Respondents about Perception Statements

Table 40: District-wise distribution of respondents about perception statements

| RAWALPINDI | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|----------------------------|--|---|--|
| Strongly disagree | 3.9 | 5.7 | 3.9 |
| Disagree | 19.2 | 7.8 | 10.6 |
| Neither agree nor disagree | 15.6 | 15.6 | 14.2 |
| Agree | 26.2 | 15.3 | 33.7 |
| Strongly agree | 8.2 | 1.4 | 16.3 |
| Do not know | 27.0 | 54.3 | 21.3 |
| Total (actual numbers) | 282 | 282 | 282 |

| CHARSADDA | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|----------------------------|--|---|--|
| Strongly disagree | 4.6 | 5.0 | 3.2 |
| Disagree | 11.7 | 7.8 | 4.3 |
| Neither agree nor disagree | 0.0 | 0.4 | 0.4 |
| Agree | 37.5 | 24.2 | 42.1 |
| Strongly agree | 2.5 | 0.7 | 1.8 |
| Do not know | 43.8 | 61.9 | 48.2 |
| Total (actual numbers) | 283 | 281 | 280 |

| THARPARKAR | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|-------------------|--|---|--|
| Strongly disagree | 0.4 | 0.4 | 1.1 |
| Disagree | 8.2 | 5.0 | 2.1 |

| | | | |
|----------------------------|------|------|------|
| Neither agree nor disagree | 1.4 | 2.5 | 4.3 |
| Agree | 8.5 | 5.0 | 2.9 |
| Strongly agree | 0.4 | 0.0 | 0.7 |
| Do not know | 81.2 | 87.2 | 89.0 |
| Total (actual numbers) | 282 | 281 | 281 |

ZIARAT

| | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|----------------------------|---|--|---|
| Strongly disagree | 3.3 | 1.8 | 2.9 |
| Disagree | 25.6 | 23.5 | 10.3 |
| Neither agree nor disagree | 5.1 | 8.5 | 7.0 |
| Agree | 24.5 | 12.1 | 19.5 |
| Strongly agree | 3.3 | 1.8 | 2.2 |
| Do not know | 38.1 | 52.2 | 58.1 |
| Total (actual numbers) | 273 | 272 | 272 |

POONCH

| | Insurance is only for persons with a lot of money (% responses) | I have a high level of trust in insurance companies to pay out what was promised (% responses) | I believe that the insurance premiums are unnecessary expense of my household (% responses) |
|----------------------------|---|--|---|
| Strongly disagree | 7.0 | 2.5 | 9.5 |
| Disagree | 43.2 | 29.8 | 25.4 |
| Neither agree nor disagree | 7.7 | 21.4 | 21.9 |
| Agree | 24.6 | 19.3 | 10.3 |
| Strongly agree | 2.5 | 0.7 | 2.1 |
| Do not know | 15.1 | 26.3 | 30.7 |
| Total (actual numbers) | 285 | 285 | 283 |

Annex VII – Characteristics of a typical household in target districts

Table 41: Literacy Rates

| District | Literacy rate (age 10 & above) in Percentage | | |
|-------------------|--|--------|-------|
| | Male | Female | Total |
| Rawalpindi | 61.4 | 50.4 | 56.8 |
| Charsadda | 47.8 | 30.4 | 39.7 |
| Tharparkar | 49.9 | 17.6 | 34.9 |
| Ziarat | 68.2 | 44.6 | 57.4 |
| Poonch | 86.8 | 73.9 | 80.7 |
| Overall | 63.2 | 44.7 | 54.8 |

Table 42: Main source of drinking water (Percentage of the households)

| District | Piped Water | Hand Pump | Motorized Pumping | Close Well | Open Well | River/ Lake/ Pound/ Stream | Tanker / Truck / Vendor | Mineral Water | Filtration Plant | Other | Total |
|-------------------|-------------|-----------|-------------------|------------|-----------|-------------------------------------|-------------------------|---------------|------------------|-------|-------|
| Rawalpindi | 53.7 | 5.3 | 3.9 | 16.8 | 0.0 | 0.0 | 0.4 | 0.0 | 18.6 | 1.4 | 100 |
| Charsadda | 26.9 | 39.9 | 23.7 | 3.9 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 100 |
| Tharparkar | 9.1 | 23.0 | 0.4 | 0.0 | 37.2 | 14.6 | 10.2 | 0.0 | 0.0 | 5.5 | 100 |
| Ziarat | 0.4 | 0.0 | 19.6 | 4.4 | 1.8 | 14.9 | 58.2 | 0.0 | 0.0 | 0.7 | 100 |
| Poonch | 26.8 | 0.7 | 7.8 | 1.4 | 1.1 | 62.0 | 0.0 | 0.4 | 0.0 | 0.0 | 100 |
| Overall | 23.6 | 13.8 | 11.1 | 5.4 | 8.3 | 18.3 | 13.5 | 0.1 | 3.8 | 2.2 | 100 |

Table 43: Type of latrine does the household use (Percentage of the households)

| District | No toilet in the household | Flush connected to public sewerage | Flush connected to pit | Flush connected to open drain | Dry raised latrine | Dry pit latrine | Other | Total |
|------------|----------------------------|------------------------------------|------------------------|-------------------------------|--------------------|-----------------|-------|-------|
| Rawalpindi | 1.1 | 79.5 | 7.8 | 11.7 | 0.0 | 0.0 | 0.0 | 100 |
| Charsadda | 2.9 | 36.0 | 57.6 | 1.4 | 0.0 | 0.7 | 1.4 | 100 |
| Tharparkar | 39.6 | 1.9 | 28.5 | 8.2 | 0.0 | 10.4 | 11.5 | 100 |
| Ziarat | 0.4 | 1.8 | 35.0 | 36.9 | 0.7 | 25.2 | 0.0 | 100 |
| Poonch | 15.9 | 0.4 | 76.4 | 5.3 | 0.4 | 1.4 | 0.4 | 100 |
| Overall | 11.8 | 24.2 | 41.2 | 12.6 | 0.2 | 7.4 | 2.6 | 100 |

Table 44: Overall condition of the house (Percentage of the households)

| District | Good | Partial renovation required | Major renovation required | Terrible | Total |
|------------|------|-----------------------------|---------------------------|----------|-------|
| Rawalpindi | 36.6 | 39.4 | 22.5 | 1.4 | 100 |
| Charsadda | 13.6 | 56.1 | 27.1 | 3.2 | 100 |
| Tharparkar | 14.7 | 65.1 | 15.1 | 5.2 | 100 |
| Ziarat | 50.6 | 36.4 | 10.8 | 2.2 | 100 |
| Poonch | 30.6 | 29.9 | 17.3 | 22.2 | 100 |
| Overall | 29.2 | 45.3 | 18.7 | 6.9 | 100 |

Table 45: Does your dwelling have a separate kitchen? (Percentage of the households)

| District | Yes | No | Total |
|------------|------|------|-------|
| Rawalpindi | 66.0 | 34.0 | 100 |
| Charsadda | 69.5 | 30.5 | 100 |
| Tharparkar | 44.2 | 55.8 | 100 |
| Ziarat | 99.6 | 0.4 | 100 |
| Poonch | 74.7 | 25.4 | 100 |
| Total | 70.7 | 29.3 | 100 |

Table 46: Does the household have an electricity connection? (Percentage of the households)

| District | Yes | No | Total |
|--------------|------|------|-------|
| Rawalpindi | 97.5 | 2.5 | 100 |
| Charsadda | 95.7 | 4.4 | 100 |
| Tharparkar | 48.5 | 51.5 | 100 |
| Ziarat | 99.6 | 0.4 | 100 |
| Poonch | 97.8 | 2.2 | 100 |
| Total | 88.1 | 11.9 | 100 |

Table 47: What is the main construction material of the walls? (Percentage of the households)

| District | Brick/Cement | Sheet/Wood | Mud built | Hay /Bamboo | Block and steel | Other | Total |
|--------------|--------------|------------|-----------|-------------|-----------------|-------|-------|
| Rawalpindi | 97.2 | 1.1 | 0.4 | 0.0 | 1.1 | 0.4 | 100 |
| Charsadda | 74.6 | 2.5 | 21.6 | 0.0 | 0.7 | 0.7 | 100 |
| Tharparkar | 18.0 | 49.1 | 22.7 | 7.3 | 0.7 | 2.2 | 100 |
| Ziarat | 32.2 | 1.1 | 49.5 | 5.5 | 0.4 | 11.4 | 100 |
| Poonch | 53.5 | 8.1 | 16.2 | 0.0 | 21.8 | 0.4 | 100 |
| Total | 55.6 | 12.2 | 21.8 | 2.5 | 5.0 | 2.9 | 100 |

Table 48: What is the main construction material of the roof? (Percentage of the households)

| District | Cement | Sheet/Wood | Tile/Wood | Hay/Bamboo | Tin | Zinc | Other | Total |
|--------------|--------|------------|-----------|------------|------|------|-------|-------|
| Rawalpindi | 94.7 | 1.1 | 1.4 | 1.1 | 1.4 | 0.0 | 0.4 | 100 |
| Charsadda | 55.0 | 11.0 | 31.9 | 1.1 | 0.4 | 0.0 | 0.7 | 100 |
| Tharparkar | 10.3 | 42.7 | 9.6 | 36.8 | 0.0 | 0.0 | 0.7 | 100 |
| Ziarat | 13.0 | 0.7 | 6.3 | 9.3 | 58.2 | 1.1 | 11.5 | 100 |
| Poonch | 40.5 | 27.5 | 1.8 | 0.4 | 29.2 | 0.0 | 0.7 | 100 |
| Total | 43.2 | 16.5 | 10.2 | 9.5 | 17.6 | 0.2 | 2.7 | 100 |

Table 49: What is the main source of drinking water? (Percentage of the households)

| What is the main source of drinking water | Rawalpindi | Charsadda | Tharparkar | Ziarat | Poonch | Total |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Piped Water | 53.7 | 26.9 | 9.1 | 0.4 | 26.8 | 23.6 |
| Hand Pump | 5.3 | 39.9 | 23.0 | 0.0 | 0.7 | 13.8 |
| Motorized Pumping | 3.9 | 23.7 | 0.4 | 19.6 | 7.8 | 11.1 |
| Close Well | 16.8 | 3.9 | 0.0 | 4.4 | 1.4 | 5.4 |
| Open Well | 0.0 | 2.1 | 37.2 | 1.8 | 1.1 | 8.3 |
| River/Lake/Pound/Stream | 0.0 | 0.0 | 14.6 | 14.9 | 62.0 | 18.3 |
| Tanker/Truck/ Vendor | 0.4 | 0.0 | 10.2 | 58.2 | 0.0 | 13.5 |
| Mineral Water | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 |
| Filtration Plant | 18.6 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 |
| Others | 1.4 | 3.5 | 5.5 | 0.7 | 0.0 | 2.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 50: What type of latrine does the household use? (Percentage of the households)

| What type of latrine does the household use | Rawalpindi | Charsadda | Tharparkar | Ziarat | Poonch | Total |
|---|------------|------------|------------|------------|------------|------------|
| No toilet in the household | 1.1 | 2.9 | 39.6 | 0.4 | 15.9 | 11.8 |
| Flush connected to public sewerage | 79.5 | 36.0 | 1.9 | 1.8 | 0.4 | 24.2 |
| Flush connected to pit | 7.8 | 57.6 | 28.5 | 35.0 | 76.4 | 41.2 |
| Flush connected to open drain | 11.7 | 1.4 | 8.2 | 36.9 | 5.3 | 12.6 |
| Dry raised latrine | 0.0 | 0.0 | 0.0 | 0.7 | 0.4 | 0.2 |
| Dry pit latrine | 0.0 | 0.7 | 10.4 | 25.2 | 1.4 | 7.4 |
| Other | 0.0 | 1.4 | 11.5 | 0.0 | 0.4 | 2.6 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Table 51: What is the main fuel used for cooking? (Percentage of the households)

| District | Fire Wood | Gas | Kerosene | Dung Cake | Others | Total |
|------------|-----------|------|----------|-----------|--------|-------|
| Rawalpindi | 7.0 | 92.3 | 0.7 | 0.0 | 0.0 | 100 |
| Charsadda | 54.6 | 44.0 | 1.1 | 0.0 | 0.4 | 100 |
| Tharparkar | 96.0 | 3.7 | 0.0 | 0.4 | 0.0 | 100 |
| Ziarat | 54.9 | 44.4 | 0.7 | 0.0 | 0.0 | 100 |
| Poonch | 91.2 | 8.4 | 0.4 | 0.0 | 0.0 | 100 |
| Total | 60.5 | 38.8 | 0.6 | 0.1 | 0.1 | 100 |

Table 52: Overall condition of the house? (Percentage of the households)

| District | Good | Partial renovation required | Major renovation required | Terrible | Total |
|------------|------|-----------------------------|---------------------------|----------|-------|
| Rawalpindi | 36.6 | 39.4 | 22.5 | 1.4 | 100 |
| Charsadda | 13.6 | 56.1 | 27.1 | 3.2 | 100 |
| Tharparkar | 14.7 | 65.1 | 15.1 | 5.2 | 100 |
| Ziarat | 50.6 | 36.4 | 10.8 | 2.2 | 100 |
| Poonch | 30.6 | 29.9 | 17.3 | 22.2 | 100 |
| Total | 29.2 | 45.3 | 18.7 | 6.9 | 100 |

Table 53: During last 12 months have you spent any money to improve OR repair your household? (Percentage of the households)

| District | Yes | No | Total |
|------------|------|------|-------|
| Rawalpindi | 9.1 | 90.9 | 100 |
| Charsadda | 19.2 | 80.8 | 100 |
| Tharparkar | 36.2 | 63.8 | 100 |
| Ziarat | 23.3 | 76.7 | 100 |
| Poonch | 11.6 | 88.4 | 100 |
| Total | 19.8 | 80.2 | 100 |

Table 54: How much money did you spend on the repair improvement? (Average amount)

| District | Mean | N |
|------------|---------|-----|
| Rawalpindi | 95,800 | 25 |
| Charsadda | 94,815 | 54 |
| Tharparkar | 12,348 | 101 |
| Ziarat | 79,039 | 64 |
| Poonch | 221,464 | 33 |
| Total | 76,278 | 277 |

Table 55: Why did you undertake repair or improvement? (Percentage of the households)

| District | To make it look good | To make more room for residential purposes | To make space for business | To make it resilient against for extreme weather conditions such as flash floods | To create storage for water and food | Other | Total |
|------------|----------------------|--|----------------------------|--|--------------------------------------|-------|-------|
| Rawalpindi | 44.0 | 20.0 | 0.0 | 16.0 | 4.0 | 16.0 | 100 |
| Charsadda | 24.0 | 10.0 | 10.0 | 28.0 | 12.0 | 16.0 | 100 |
| Tharparkar | 8.6 | 29.0 | 3.2 | 52.7 | 2.2 | 4.3 | 100 |
| Ziarat | 75.0 | 17.2 | 1.6 | 4.7 | 0.0 | 1.6 | 100 |
| Poonch | 45.5 | 21.2 | 0.0 | 27.3 | 0.0 | 6.1 | 100 |
| Total | 35.5 | 20.8 | 3.4 | 29.8 | 3.4 | 7.2 | 100 |

Table 56: What was the source of money for the repair improvement? (Percentage of the households)

| Source of repair improvement | Rawalpindi | Charsadda | Tharparkar | Ziarat | Poonch | Total |
|------------------------------|------------|------------|------------|------------|------------|------------|
| Bank loan | 12.5 | 2.0 | 7.2 | 0.0 | 6.5 | 4.9 |
| Savings | 54.2 | 10.0 | 37.1 | 73.0 | 22.6 | 40.4 |
| Money lender | 0.0 | 0.0 | 9.3 | 4.8 | 0.0 | 4.5 |
| Relatives | 29.2 | 62.0 | 18.6 | 19.1 | 48.4 | 31.3 |
| Housing finance | 0.0 | 0.0 | 4.1 | 0.0 | 3.2 | 1.9 |
| Sold assets | 4.2 | 2.0 | 2.1 | 3.2 | 3.2 | 2.6 |
| Grant from Government | 0.0 | 6.0 | 1.0 | 0.0 | 3.2 | 1.9 |
| Aid from International | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.4 |
| Aid from NGOs | 0.0 | 8.0 | 1.0 | 0.0 | 3.2 | 2.3 |
| Other | 0.0 | 10.0 | 19.6 | 0.0 | 6.5 | 9.8 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Table 57: If you wanted to buy/ construct a dwelling just like this today, how much money would you have to pay?

| District | Mean Value | Median Value | N |
|--------------|------------------|----------------|--------------|
| Rawalpindi | 2,451,527 | 2,000,000 | 275 |
| Charsadda | 555,708 | 400,000 | 106 |
| Tharparkar | 106,307 | 70,000 | 257 |
| Ziarat | 1,343,857 | 500,000 | 245 |
| Poonch | 891,115 | 700,000 | 260 |
| Total | 1,156,020 | 600,000 | 1,143 |

Annex VIII - Choices about using 'gift money'

Rawalpindi

Table 58: Choices about using gift money

| Amount of Gift money | Choice of using gift money | | | | | | | | |
|-----------------------------|----------------------------|--------------------|---|--|---|--|--|-------|-------|
| | Save it | Invest in business | Invest in protective measures for drought or flash floods | Give it as gift/loan to friends and family | Spend it on necessary items (like food) | Spend it on non-productive items like electronics and other consumer goods | Spend money on productive assets like livestock etc. | Other | Total |
| Up to 3,000 | 15.3% | 1.1% | 1.1% | 3.6% | 72.7% | 6.0% | 0.0% | 0.4% | 100% |
| Up to 25,000 | 22.3% | 30.1% | 1.1% | 0.4% | 13.5% | 28.4% | 2.5% | 1.8% | 100% |
| Up to 100,00 or more | 31.1% | 56.2% | 2.8% | 0.0% | 1.1% | 2.1% | 2.5% | 4.2% | 100% |

Charsadda

| Amount of Gift money | Choice of using gift money | | | | | | | | |
|-----------------------------|----------------------------|--------------------|---|--|---|--|--|-------|-------|
| | Save it | Invest in business | Invest in protective measures for drought or flash floods | Give it as gift/loan to friends and family | Spend it on necessary items (like food) | Spend it on non-productive items like electronics and other consumer goods | Spend money on productive assets like livestock etc. | Other | Total |
| Up to 3,000 | 13.5% | 15.5% | 2.4% | 4.0% | 61.9% | 0.4% | 2.0% | 0.4% | 100% |
| Up to 25,000 | 5.5% | 45.7% | 1.6% | 0.0% | 37.5% | 3.9% | 4.7% | 1.2% | 100% |
| Up to 100,00 or more | 1.9% | 85.2% | 1.1% | 0.0% | 2.3% | 4.6% | 4.2% | 0.8% | 100% |

Tharparkar

| Amount of Gift money | Choice of using gift money | | | | | | | | |
|----------------------|----------------------------|--------------------|---|--|---|--|--|-------|-------|
| | Save it | Invest in business | Invest in protective measures for drought or flash floods | Give it as gift/loan to friends and family | Spend it on necessary items (like food) | Spend it on non-productive items like electronics and other consumer goods | Spend money on productive assets like livestock etc. | Other | Total |
| Up to 3,000 | 49.3% | 7.6% | 1.5% | 1.1% | 18.1% | 0.4% | 22.1% | 0.0% | 100% |
| Up to 25,000 | 1.5% | 31.2% | 1.1% | 3.6% | 6.2% | 4.4% | 52.2% | 0.0% | 100% |
| Up to 100,00 or more | 0.4% | 53.1% | 1.1% | 1.8% | 1.8% | 2.5% | 35.4% | 4.0% | 100% |

Ziarat

| Amount of Gift money | Choice of using gift money | | | | | | | | |
|----------------------|----------------------------|--------------------|---|--|---|--|--|-------|-------|
| | Save it | Invest in business | Invest in protective measures for drought or flash floods | Give it as gift/loan to friends and family | Spend it on necessary items (like food) | Spend it on non-productive items like electronics and other consumer goods | Spend money on productive assets like livestock etc. | Other | Total |
| Up to 3,000 | 14.2% | 4.5% | 0.8% | 16.4% | 61.9% | 0.0% | 0.0% | 2.2% | 100% |
| Up to 25,000 | 33.2% | 14.8% | 0.4% | 1.1% | 26.6% | 21.4% | 1.9% | 0.7% | 100% |
| Up to 100,00 or more | 52.0% | 32.8% | 0.4% | 0.4% | 1.1% | 1.1% | 3.7% | 8.5% | 100% |

Poonch

| Amount of Gift money | Choice of using gift money | | | | | | | | |
|----------------------|----------------------------|--------------------|---|--|---|--|--|-------|-------|
| | Save it | Invest in business | Invest in protective measures for drought or flash floods | Give it as gift/loan to friends and family | Spend it on necessary items (like food) | Spend it on non-productive items like electronics and other consumer goods | Spend money on productive assets like livestock etc. | Other | Total |
| Up to 3,000 | 5.3% | 1.8% | 2.1% | 4.6% | 85.2% | 0.4% | 0.4% | 0.4% | 100% |
| Up to 25,000 | 1.1% | 19.0% | 1.4% | 3.9% | 70.4% | 0.0% | 3.2% | 1.1% | 100% |
| Up to 100,00 or more | 1.4% | 66.2% | 2.1% | 2.1% | 10.2% | 0.0% | 17.3% | 0.7% | 100% |

Annex IX - Training Manual for Enumerators

Training Manual was prepared in both English and Urdu languages for better understanding of the enumerators. In addition to the manual, training had several interactive sessions and mock survey was also carried out.

Introduction

This training manual is prepared for the Demand Assessment for Climate Risk Insurance in Pakistan. The basic objective is to assess demand for micro insurance in the extreme weather related events.

Demand Assessment Team

Demand Assessment teams are composed of the following:

- i. Enumerators
- ii. Supervisors
- iii. Senior consultants

1. Enumerators

Main responsibility of the enumerators is to collect data from selected households on the basis of given questionnaire. A specific questionnaire is prepared for this purpose. Enumerators are trained well regarding each and every section of the questionnaire so that information gathered is authentic and useful. Enumerators are asked to fill-in the questionnaire with utmost care and professionalism. After the completion of the form, enumerators should ensure all entries are fed in the questionnaire before putting their signatures on the form.

2. Supervisors

Role of supervisor is very significant in the Demand Assessment process. He is specifically responsible for the following tasks:

1. Ensure quality of the Demand Assessment
2. Gathering of complete information
3. Getting the work done on timely and proper manner
4. Stay informed with the activities of the enumerators and keep higher-ups updated on the progress

5. In case of any hurdle during the Demand Assessment, find solution and get external support if required.
6. Scrutinize Demand Assessment forms on daily basis for any incomplete or incorrect information

Important instructions for the Questionnaire

It is important to comply with the following instructions while filling the forms:

1. This questionnaire is to be filled from Head of the Household and if he is not present then from the person who has decision making authority in absence of head of the household
2. This questionnaire is formulated in a specific format and order. Please follow the order. Do not change the order of the questions for convenience purpose.
3. Before starting the Demand Assessment, enumerators are required to introduce themselves and explain the purpose of it.
4. Enumerators are asked to explicitly inform the respondents that they are not part of any money distribution process. Respondents must not expect any monetary benefits in lieu of the Demand Assessment.
5. Enumerators are required to fill the questionnaire themselves. They can not hand over the form to respondents.
6. Try to get answers for each and every question. If answer is not received after multiple attempts then write 99 in the answer section.
7. Use the same vocabulary used in the questions. Do not try to change the words or elaborate in your own words.
8. Do not fill the Demand Assessment form in presence of any third person which is not related to the household being interviewed.
9. On completion of the Demand Assessment form, enumerators must ensure all sections are duly filled. Write the time of the initiation and completion of interview. Thank the respondent for his time for the interview.
10. Use the given pencil only. Use of ink pen or any other pen is not allowed.
11. For answers, use only the provided box space. Do not tick or circle answer options given in question.
12. Only give multiple answers for those questions specified in the Demand Assessment form and briefed during the training.

13. If respondent is not able to understand question then repeat. Avoid using eraser or cutting on the Demand Assessment form.
14. Don't tell the respondent whether their answer is correct or not. No clue should be provided to respondents.
15. Enumerators should not give the impression about importance of any particular section to the respondent.
16. Enumerators are asked to keep their focus questionnaire during the interview. Use of mobile phone is prohibited.

Important Elements of the Demand Assessment Form and respective instructions

Section 1-A

Enumerators own details name, signatures, date and interview time

Section 1-B

Write specific codes for the locality, district and add phone number of the head of the household and/or National identity number

Section 2 & 3

Awareness and information

- Write all answers in codes.
- Questions regarding adjustments a-s, should be asked one by one. Complete one question before jumping to the next one.

Section 4

General perception about insurance

- Write according to the exact answers given by respondents.
- Do not leave any question unanswered.

Section 5

Coping Mechanisms

- Questions related to each event should be answered in codes
- Narrate all the events and then record responses related to each event.

Section 6

Savings

Get answers for all the questions. If answer is not available then write 99. Don't leave empty spaces.

Section 7

Get answers for all the questions. If answer is not available then write 99. Don't leave empty spaces.

Section 8 & 9

This section is about income and expenditures. Respondents usually hesitate in responding to such questions. Enumerators need to ensure respondents that all the information collected will be strictly confidential and will only be used for research purposes. Write only what is said. Fill the section on women and social behaviours also as required in the Demand Assessment form.

Section 12

This segment has 9 questions which are given in columns along with relevant codes. Need to ask all questions one by one and write relevant code in the given space. Ask about names and age of all members of the household in order. The Person Code given in this section shall remain same for all the next sections.

Section 10

Write about education details of all members of the household. Person ID used in section 12 should be used in this section with relevant codes.

Section 11

This section deals with questions regarding agriculture and livestock. Some questions are mandatory and some are not. Use code where provided.

Section 13

Get all the household information from head of the household

General Instructions regarding Section 10 and 12

- i. Get information regarding all the members of the household
- ii. Write answers according to the Person ID given in section 12.
- iii. The questions which have codes, should be answered in codes.
- iv. The questions which don't have codes should be answered in numbers of clear words.

- v. Follow the skip patterns in the Demand Assessment form
- vi. It is advisable to write answers row-wise in this section

General Instructions

- Enumerators are asked to dress neatly according to the local culture and weather conditions.
- Enumerators must not try to project themselves as superior beings than the respondents
- Take extra caution about time, avoid unnecessary conversations or use of mobile phone.

Annex X - Demand Assessment Instrument

Form Number (For office use only)

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

Microinsurance Demand Assessment

Section 1-A: la Enumerator's Information

Name of
Enumerator
شمار کنندہ کا
نام

| |
|--|
| |
|--|

Signature

شمار کنندہ کے
دستخط

| |
|--|
| |
|--|

Date of
Enumeration
شمار کی تاریخ

| | | | | | |
|--|--|--|--|---|---|
| | | | | 1 | 5 |
|--|--|--|--|---|---|

Start Time

Finish Time

| | |
|--|--|
| | |
|--|--|

Section 1-B: Geographical Locations

| | | | | | |
|---|---|-------------------------------|---|--|-------------------------------|
| Province صوبہ کا نام 1. Punjab, 2. Sindh 3. KPK 4. Balochistan 5. AJK | District ضلع کا نام 1. Rawalpindi, 2. Charsadda, 3. Tharparkar 4. Ziarat 5. Poonch | Tehsil (Name) تحصیل کا نام | Union Council (Name and Number) یونین کونسل کا نام اور نمبر | Village/Locality (Name) موضع/علاقہ کا نام | Post-office (Name) ڈاکخانہ |
|---|---|-------------------------------|---|--|-------------------------------|

Respondent's or any other member's mobile number, Landline number

جواب دہندہ یا گھر کے کسی فرد کا موبائل نمبر

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

Section 2: Awareness / Adjustments about Climate Change and Extreme Weather Conditions

| | |
|---|---|
| <p>1. Have you noticed any long-term changes in <i>average</i> temperature over the last 20 years?</p> <p>کیا آپ پچھلے بیس سال میں اوسط درجہ حرارت میں ہونے والی تبدیلیوں سے آگاہ ہیں؟</p> <p>1. Yes, it has increased <input type="checkbox"/></p> <p>2. Yes, it has decreased <input type="checkbox"/></p> <p>3. No, it has been the same <input type="checkbox"/></p> | <p>2. Have you noticed any long-term changes in <i>speed</i> of rainfall resulting in floods over the last 20 years?</p> <p>کیا آپ پچھلے بیس سال میں ہونے والی اوسط بارش کی رفتار میں ہونے والی تبدیلیوں سے آگاہ ہیں؟</p> <p>1. Yes, it has increased <input type="checkbox"/></p> <p>2. Yes, it has decreased <input type="checkbox"/></p> <p>3. No, it has been the same <input type="checkbox"/></p> |
| <p>3. Have you noticed any long-term changes in average availability of water resulting in drought over the last 20 years?</p> <p>کیا آپ پچھلے بیس سال کے دوران پانی کی اوسط دستیابی جو کہ خشک سالی کا موجب بن سکتی ہے، میں ہونے والی تبدیلیوں سے آگاہ ہیں؟</p> <p>1. Yes, it has increased <input type="checkbox"/></p> <p>2. Yes, it has decreased <input type="checkbox"/></p> <p>3. No, it has been the same <input type="checkbox"/></p> | <p>4. Have you attended any training or orientation session by any agency about climate change or extreme weather conditions?</p> <p>کیا آپ نے کبھی موسمیاتی تبدیلیوں میں یا شدید موسمی حالات کے متعلق کسی بھی ادارے کی کوی تربیت حاصل کی ہے؟</p> <p>1. Yes <input type="checkbox"/></p> <p>2. No <input type="checkbox"/></p> <p>5. If yes, give Name of the agency which provided training/Orientation</p> <p>.....</p> |

Section 3-A:

What adjustments has your household made to these long-term changes in 5 years?

| Sr. | Type of adjustment | 1- Average temperature اوسط درجہ حرارت | 2 - Average rainfall اوسط بارش | 3 - Average flash floods اوسط سیلابی ریلے | 4 - Average days of drought اوسط خشک سالی |
|-----|--|---|-----------------------------------|--|---|
| 1. | Strengthen house مضبوط بنایا ہے۔ گھر کو | | | | |
| 2. | Build a greenhouse بنایا ہے۔ گرین ہاوس | | | | |
| 3. | Move to secure shelter in a disaster مقام پر منتقلی۔ آفت آنے پر محفوظ | | | | |
| 4. | Plant trees for shading and protection درخت لگائے ہیں۔ حفاظت اور سائے کے لیے | | | | |
| 5. | Keep emergency food supplies فراہمی کو یقینی بنانا۔ ہنگامی حالات میں خوراک کی | | | | |
| 6. | Implement soil conservation techniques لئے طریقہ کار۔ زمین کی حفاظت کے | | | | |
| 7. | Buy insurance بیمہ کرایا ہے۔ | | | | |
| 8. | Change crop variety بدلی ہے۔ فصل کی قسم | | | | |
| 9. | Change from crop to livestock مویشی پالے ہیں۔ فصلوں کی بجائے | | | | |
| 10. | Reduce number of livestock کمی کی ہے۔ مویشیوں کی تعداد میں | | | | |
| 11. | Evacuate livestock کا کام کیا ہے۔ مویشیوں کو نکالنے | | | | |
| 12. | Irrigate more (or less) کیا ہے۔ آبپاشی کو بڑھایا/کم | | | | |
| 13. | River/water/drainage management انتظام۔ دریا/پانی/نالے کا | | | | |
| 14. | Build a water harvesting scheme کی سکیم۔ پانی ذخیرہ کرنے | | | | |
| 15. | Change job تبدیلی۔ روزگار/ملازمت میں | | | | |
| 16. | Take extra employment مزید روزگار کا | | | | |

| | | | | | |
|-----|-----------------------|--------------|--|--|--|
| | حصول۔ | | | | |
| 17. | Migrate | ہجرت/منتقلی۔ | | | |
| 18. | Other (specify) | | | | |

Section 3-B:

| | | |
|--|---|---|
| <p>1. Who is mainly deciding in the household whether to make adjustments? (Indicate name and ID code)</p> <p>آپ کے گھر میں ان تبدیلیوں کے متعلق اہم فیصلے کون کرتا ہے؟</p> <p>a. Name</p> <p>b. ID code from Roster (Section-12) <input type="text"/></p> | <p>2. What were the main constraints/difficulties in adjusting?</p> <p>تبدیلیاں کرنے کے دوران کس طرح کی مشکلات پیش آتی ہیں؟</p> <p>1. None <input type="text"/></p> <p>2. Lack of money, 3. Lack of information <input type="text"/></p> <p>4. Shortage of labor, 5. Other (specify).....</p> | <p>3. Why would your household have not made any adjustments? Please, specify</p> <p>آپ کے گھر نے ایسی تبدیلیاں کیوں نہیں کی؟</p> <p>1. Adjusting does not help</p> <p>2. God will help us <input type="text"/></p> <p>3. Other (specify)..... <input type="text"/></p> |
|--|---|---|

Section 4: General perception about insurance services

| | | |
|---|--|---|
| <p>1. Insurance is only for persons with a lot of money</p> <p>بیمہ صرف مالدار لوگوں کے لیے ہوتا ہے۔</p> <p>1. Strongly disagree 2. Disagree</p> <p>3. Neither agree nor disagree 4. Agree <input type="text"/></p> <p>5. Strongly agree 6. Do not know</p> | <p>2. I have a high level of trust in insurance companies to pay out what was promised</p> <p>میرا بیمہ کمپنیوں پر پورا اعتماد ہے کہ وہ اتنے ہی پیسے ادا کرتے ہیں جتنا وعدا کرتے ہیں</p> <p>1. Strongly disagree 2. Disagree <input type="text"/></p> <p>3. Neither agree nor disagree 4. Agree <input type="text"/></p> <p>5. Strongly agree 6. Do not know</p> | <p>3. I believe that the insurance premiums are unnecessary expense of my household</p> <p>مجھے یقین ہے کہ بیمہ کی قسط کی ادائیگی میرے گھر کے اخراجات میں ایک غیر ضروری خرچ ہوگا۔</p> <p>1. Strongly disagree 2. Disagree <input type="text"/></p> <p>3. Neither agree nor disagree 4. Agree <input type="text"/></p> <p>5. Strongly agree 6. Do not know</p> |
|---|--|---|

Utilization of insurance

| <p>4. Does your household have insurance? کیا آپ کے گھرانے میں کسی قسم کا بیمہ ہے؟</p> <p>1. Yes 2. No → Q-6</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>5. Type of insurance اگر بیمہ ہے تو کس قسم کا بیمہ ہے؟</p> <table border="0"> <tr> <td>1. Life insurance</td> <td>2. Health insurance</td> <td>3. House insurance</td> </tr> <tr> <td></td> <td>4. Vehicle insurance</td> <td>5. Personal accident</td> </tr> <tr> <td>6. Crop insurance</td> <td>7. Livestock</td> <td>8. Weather-index</td> </tr> <tr> <td></td> <td></td> <td>8. Other</td> </tr> </table> <p>(specify)</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>(a)</th> <th>(b)</th> <th>(c)</th> <th>(d)</th> <th>(e)</th> <th>(f)</th> </tr> <tr> <td style="height: 100px;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | 1. Life insurance | 2. Health insurance | 3. House insurance | | 4. Vehicle insurance | 5. Personal accident | 6. Crop insurance | 7. Livestock | 8. Weather-index | | | 8. Other | (a) | (b) | (c) | (d) | (e) | (f) | | | | | | | <p>6. Why does your household not have any insurance? آپ کے گھرانے کے پاس کسی قسم کا بیمہ کیوں نہیں ہے؟</p> <table border="0"> <tr> <td>1. Do not know enough about it</td> <td>2. Do not know where to get insurance</td> </tr> <tr> <td>3. Insurance companies are too far away</td> <td>4. Insurance companies take too long to pay out</td> </tr> <tr> <td>5. Too expensive</td> <td>6. Do not trust insurers</td> </tr> <tr> <td>7. I do not trust that insurance companies will pay out what promised</td> <td>8. Application too complex</td> </tr> <tr> <td>9. Not needed/not relevant</td> <td>10. Never thought of it</td> </tr> <tr> <td>11. Religious reasons</td> <td></td> </tr> <tr> <td>12. Other (specify)</td> <td></td> </tr> </table> <div style="text-align: center; margin-top: 20px;">11.</div> <p>Other(specify)</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <th>(a)</th> <th>(b)</th> <th>(c)</th> <th>(d)</th> <th>(e)</th> <th>(f)</th> </tr> <tr> <td style="height: 100px;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | 1. Do not know enough about it | 2. Do not know where to get insurance | 3. Insurance companies are too far away | 4. Insurance companies take too long to pay out | 5. Too expensive | 6. Do not trust insurers | 7. I do not trust that insurance companies will pay out what promised | 8. Application too complex | 9. Not needed/not relevant | 10. Never thought of it | 11. Religious reasons | | 12. Other (specify) | | (a) | (b) | (c) | (d) | (e) | (f) | | | | | | |
|--|---|----------------------|---------------------|--------------------|-----|----------------------|----------------------|-------------------|--------------|------------------|--|--|----------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--------------------------------|---------------------------------------|---|---|------------------|--------------------------|---|----------------------------|----------------------------|-------------------------|-----------------------|--|---------------------|--|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| 1. Life insurance | 2. Health insurance | 3. House insurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4. Vehicle insurance | 5. Personal accident | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Crop insurance | 7. Livestock | 8. Weather-index | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8. Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) | (b) | (c) | (d) | (e) | (f) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Do not know enough about it | 2. Do not know where to get insurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Insurance companies are too far away | 4. Insurance companies take too long to pay out | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Too expensive | 6. Do not trust insurers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. I do not trust that insurance companies will pay out what promised | 8. Application too complex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Not needed/not relevant | 10. Never thought of it | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. Religious reasons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Other (specify) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (a) | (b) | (c) | (d) | (e) | (f) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>7. Did your household use any services or benefits available under your insurance during the last year? کیا آپ کے گھرانے نے گزشتہ سال کے دوران بیمہ کی کسی بھی سہولت سے فائدہ اٹھایا ہے؟</p> <p>1. Yes 2 No → Q.10</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>8. On a scale from 1 to 5, how satisfied is your household with the insurance services? سوال نمبر 7 میں ہاں کی صورت میں 1 تا 5 تک کے پیمانے پر اپنے اطمینان کو ظاہر کریں۔</p> | | | | |
| | <p>1. Very unsatisfied satisfied 2. Unsatisfied 3. Neutral 4. Satisfied 5. Very</p> | | | | |
| | <p>a. Premiums</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>b. Amount of paperwork needed</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>c. Location of the insurance service provider</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>d. Amount of Coverage</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> | <p>e. Speed of payout when any event occurs (illness, accident, theft)</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin-left: 100px;"></div> |

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| <p>9. How much does your household pay in total premiums per year? (PKR) آپ کا گھرانہ پریمیم کی مد میں سالانہ کتنے پیسے ادا کرتا ہے؟</p> | |
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| <p>Knowledge about weather (micro) insurance</p> <p>10. Have you ever heard about weather (micro) insurance? کیا آپ نے کبھی موسمیاتی بیمہ کے بارے میں سنا ہے؟</p> <p>[Enumerator prompt: This is a policy that will pay out what promised in case your household is affected by extreme weather condition such as flash floods and/or drought.]</p> <p>1. Yes 2. No <input type="checkbox"/></p> | <p>11. From where have you heard about weather (micro) insurance? آپ نے موسمیاتی بیمہ کے بارے میں کہاں سے سنا ہے؟</p> <p>1 Television 2 Radio 3 Newspaper <input type="checkbox"/> 4 Neighboring farmer 5 Shopkeepers in village 6 Extension officers 7 Other (specify)</p> |
|--|--|

| | | | | | |
|--|--|-------------------|--------------------------|--------------------------|-----------------------|
| <p>Demand for weather (micro) insurance</p> <p>12. Would you like to purchase weather (micro) insurance if available? کیا آپ موسمیاتی بیمہ کی پالیسی خریدنا چاہیں گے؟</p> <p>1. Very likely, 2. Likely, <input type="checkbox"/> 3. Unlikely, 4. Extremely unlikely</p> | <p>13. How much would you like to pay per year and for how many years? Write code. اگر آپ بیمہ کی قسط کی مد میں سالانہ کتنے پیسے ، اور کتنے سال تک ادا کر سکتے ہیں؟ کوڈ درج کریں۔</p> <p>a. Code <input type="checkbox"/> b. Years <input type="text"/></p> <table border="1" style="float: right;"> <tr><td>1- Up to PKR 1000</td></tr> <tr><td>2- Between PKR 1001-2000</td></tr> <tr><td>3- Between PKR 2001-5000</td></tr> <tr><td>4. More than PKR 5000</td></tr> </table> | 1- Up to PKR 1000 | 2- Between PKR 1001-2000 | 3- Between PKR 2001-5000 | 4. More than PKR 5000 |
| 1- Up to PKR 1000 | | | | | |
| 2- Between PKR 1001-2000 | | | | | |
| 3- Between PKR 2001-5000 | | | | | |
| 4. More than PKR 5000 | | | | | |

| | | | |
|--|---|---|---|
| <p>14. Why will you not like to buy weather (micro) insurance product? آپ موسمیاتی بیمہ کیوں نہیں خریدنا چاہیں گے؟</p> | | | |
| <p>1. Do not know enough about it</p> <p>3. Insurance companies are too far away</p> <p>5. Too expensive</p> <p>7. I do not trust that insurance companies will pay out what promised</p> <p>9. Not needed/not relevant</p> <p>11. Have other means of cash transfer</p> | <p>2. Do not know where to get insurance</p> <p>4. Insurance companies take too long to pay out</p> <p>6. Do not trust insurers</p> <p>8. Application too complex</p> <p>10. Never thought of it</p> <p>12. Government should pay premium for the product</p> | <p>a. <input type="checkbox"/></p> <p>b. <input type="checkbox"/></p> <p>c. <input type="checkbox"/></p> <p>d. <input type="checkbox"/></p> | <p>e. <input type="checkbox"/></p> <p>f. <input type="checkbox"/></p> <p>g. <input type="checkbox"/></p> <p>h. <input type="checkbox"/></p> |

13. Aid agencies should pay premium for the product

14. Religious reasons

14. Other(specify) _____

Section 5: Events and Coping Mechanisms (in the last two years)

[Enumerators: Ask the questions only to the respondents who have experienced any of the events on the left-hand side column].

| Events (واقعه) | Event Occurred 1. Yes 2. No | 1. When was the last time your household experienced this event? یہ واقعہ آخری دفعہ کب پیش آیا | | 2. What did your household do in response to the event? اس واقعہ سے گھرانے کے افراد نے کس طرح نمٹا (کوڈز کے لیے صفحہ کے آخر میں دیکھیں) | 3. Was there any job loss owing to the last event? کیا اس واقعہ سے کسی فرد کا روزگار کا نقصان ہوا 1. Yes 2. No | 4. How many work days were lost owing to the last event? اس واقعہ کی وجہ سے کتنے دن کام نہیں ہو سکا؟ | 5. How much money was spent on recovery from the last experienced event? اس واقعہ سے بحالی پر کتنے پیسے خرچ ہوئے [In PKR] | 6. Did the money you had as savings, borrowed or taken as gift/grant was enough to cater to your full recovery needs? کیا امدادی رقم/قرضہ وغیرہ آپ کی بحالی کی ضروریات کے لیے کافی تھا؟ 1. Yes, 2. No, 3. No loan | 7. In your view, how likely is the event will happen? آپ کے خیال میں یہ واقعہ دوبارہ وقوع پذیر ہونے کے کتنے امکانات ہیں؟ | 8. In your view, which of the following source of external help are more likely to be the most reliable? مدد کے بیرونی ذرائع میں سے آپ کے خیال کے مطابق کون سا ذریعہ سب سے زیادہ قابل اعتماد ہے؟ (کوڈز کے لیے صفحہ کے آخر میں دیکھیں) | 9. If you are warned earlier of an approaching event how likely is that you would prepare better? اگر آپ کو آئندہ ہونے والے واقعہ کے بارے میں پیشگی اطلاع دے دی جائے تو اس سے نمٹنے کے لیے آپ کس حد تک بہتر تیاری کر سکیں گے؟ |
|--------------------------|-----------------------------------|---|------------------|--|---|---|--|---|---|---|--|
| | | a. Month سال | b. Year مہینہ | | | | | | | | |
| Code & event | | | | | | | | | | | |
| 1. Crop/livestock loss | | | | | | | | | | | |
| 2. Property/house damage | | | | | | | | | | | |
| 3. Business damage | | | | | | | | | | | |
| 4. Loss of customers | | | | | | | | | | | |
| 5. Job loss | | | | | | | | | | | |
| 6. Death | | | | | | | | | | | |
| 7. Drought | | | | | | | | | | | |

| | | | | | | | | | | | |
|----|------------------------|--|--|--|--|--|--|--|--|--|--|
| 8. | Heavy rain/flash flood | | | | | | | | | | |
| 9. | Landslide | | | | | | | | | | |
| 10 | Fire | | | | | | | | | | |

| Codes for Question -2 | | |
|--|--|---|
| 1. Did nothing | 2. Used savings | 3. All household migrated to another area |
| 4. Borrowed from relatives/friends | 5. Changed job | 6. Stopped any of children from going to school |
| 7. Borrowed from bank | 8. Sold assets/jewelry | 9. Ate less |
| 10. Borrowed from, money lender | 11. Sold livestock | 12. Stopped/delayed paying bills |
| 13. Received gift/remittance from relatives living elsewhere | 15. Head of household migrated to another area | 17. Did not know what to do |
| 14. Used insurance | 16. Received aid | 20. Others (specify) |

| Codes for Question -8 | |
|---|--|
| 1. Insurance | 2. Bank loans |
| 3. Loan from money lender | 4. Gifts from family/friends |
| 5. Aid from government | 6. Aid from international organizations |
| 7. Aid from local community organization | 8. Aid from local (religious) charitable organizations |
| 9. Other (specify) | |
| Codes for Question 7 & 9 | |
| 1. Very likely, 2. Likely, 3. Unlikely, 4. Extremely unlikely | |

Section 6: Savings and Credits

| | | |
|---|---|---|
| <p>1. Does anyone in your household have a savings account of any kind? کیا آپ کے گھرانے کے کسی فرد کا کوئی بچت اکاؤنٹ ہے؟</p> <p>1. Yes 2. No</p> <div style="text-align: right; margin-top: 20px;"> <input type="checkbox"/> </div> | <p>2. What institution(s) does your household have savings with? آپ کا گھرانہ بچت کے پیسے کہاں رکھتا ہے؟</p> <p>1. Post office 2. Commercial bank 3. Government bank 4. Informal group (Community Organization, Committee etc.) 5. Within household 6. With a person of trust in community 7. Other (specify)</p> <div style="text-align: right; margin-top: 20px;"> <input type="checkbox"/> </div> | <p>3. How often do you contribute to your savings? آپ اپنی بچتوں کو ہفتہ وار/ماہانہ/پر تیسرے ماہ/سالانہ یا بے قاعدگی سے جمع کرواتے ہیں؟</p> <p>1. Weekly 2. Monthly 3. Quarterly 4. Yearly 5. Not regular</p> <div style="text-align: right; margin-top: 20px;"> <input type="checkbox"/> </div> |
| <p>4. Why do you keep these savings? آپ یہ بچت کیوں کرتے ہیں؟</p> <p>1. To start a business in future 2. To respond to emergencies such as flash floods and drought</p> | <p>5. What is the annual interest rate your household receives for savings? آپ کے گھرانہ کو بچتوں پر سالانہ کتنے فی صد منافع ملتا ہے؟ Percentage -----%</p> | <p>6. How much total savings does your household have YEARLY? (PKR) in last 3 years آپ کے گھرانہ کی سالانہ بچت کتنی ہوتی ہے؟</p> <p>1. Have no savings 2. 10,000 or less 3. 10,001 – 30,000</p> <div style="text-align: right; margin-top: 20px;"> <input type="checkbox"/> </div> |

| | |
|--|--|
| 3. To buy a house or land 4. For wedding and other special occasions 5. Health care services 6. Education 7. Others (please specify) | 4. 30,001 – 50,000 5. 50,001- 70,000 6. 70,001 or more |
|--|--|

| | | |
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| 7. Suppose someone gave your household some money as a gift. We would like to know what is the most important thing you would do with this money when the amount is ... فرض کریں کہ کسی نے آپ کو کچھ رقم تحفہ کے طور پر دی ہے، آپ اس رقم کو کس طرح استعمال کریں گے؟ | | |
| a. Up to 3,000 | b. Up to 25,000 | c. Up to 100,000 and more |
| 1. Save it 4. Give it as gift/loan to friends and family 7. Spend money on productive assets (like livestock etc.) | 2. Invest in business 5. Spend it on necessary items (like food) 8. Other (specify) | 3. Invest in protective measures for drought or flash floods 6. Spend it on non-productive items (like electronics and other consumer goods) 8. Other (specify) |

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| 8. Does your household keep any money safe for emergencies that try not to touch? کیا آپ کا گھرانہ ہنگامی صورت حال کے لیے کچھ پیسے بچا کر رکھتا ہے؟ |
| 9. What fraction of your household monthly income is saved for emergencies? آپ کا گھرانہ ، ماہانہ آمدن کا کتنے فی صد ہنگامی حالت کے لیے بچا کر رکھتا ہے؟ |
| 10. Did your household have to spend any of this money in the last six months? کیا آپ کے گھرانے کو، ان بچتوں میں سے گزشتہ چھ ماہ میں کچھ خرچ کرنے کی ضرورت پڑی؟ |

| | |
|------------|-------------------------|
| 1. Yes | 2. No >>>> next section |
| Percentage | |
| 1. Yes | 2. No |

| | | | |
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| 11. Has your household ever sought a loan from any source during the last two years? کیا گزشتہ دو سال کے دوران آپ کے گھرانہ کو کسی بھی ذریعے سے قرض لینے کی ضرورت پڑی؟ 1. Yes → Q.13 2. No, never tried to take a loan | 12. Why you did not try to take loan during last two years? >> [If did not need then go to the next section and leave the questions] آپ کے گھرانہ نے گزشتہ دو سال کے دوران قرضہ لینے کی کوشش کیوں نہیں کی؟ 1. I did not need a loan 2. Financial institution too far away 3. Too complicated to apply 4. I would not be accepted 5. Too expensive 6. Lack of collateral | 13. Who has borrowed from your household? آپ کے گھرمیں سے کس نے قرضہ لیا؟ (ID code from Roster) | 14. How many loans does your household have? آپ کے گھرانے کے ذمے کتنے قرضے واجب الادا ہیں؟ |
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| | 7. I do not trust the institutions | 8. Other (please specify) | |
|--|------------------------------------|---------------------------|--|

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| <p>15. What kind of lender your household borrowed from? آپ نے یہ قرضہ کس سے لیا؟</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>1. Commercial bank</p> <p>3. Moneylender</p> <p>5. Friends/Neighbor</p> <p>7. Relatives</p> <p>9. Shopkeeper</p> <p>11. Other (please specify)</p> </div> <div style="width: 48%;"> <p>2. Microfinance institution (Tameer Bank, Khushhali Bank, NRSP Bank etc.)</p> <p>4. Government bank (NBP)</p> <p>6. Farmer/community associations/ cooperatives</p> <p>8. Religious institution</p> <p>10. NGOs</p> </div> </div> <div style="display: flex; justify-content: flex-end; margin-top: 10px;"> <input style="width: 40px; height: 25px; margin-right: 10px;" type="text"/> <input style="width: 40px; height: 25px; margin-right: 10px;" type="text"/> <input style="width: 40px; height: 25px;" type="text"/> </div> | <p>16. What were the main reasons of requesting a loan? قرضہ کی درخواست کی بڑی وجوہات کیا تھیں؟</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>1. Agricultural activity</p> <p>3. Repaying other debts</p> <p>5. Improving household/land</p> <p>8. Education</p> <p>10. Buying livestock</p> <p>12. Paying for health expenses</p> <p>14. Other (specify)</p> </div> <div style="width: 48%;"> <p>2. For business expenses (cash flow)</p> <p>4. Expenses after an unexpected income loss</p> <p>6. Buying food/household goods</p> <p>9. Buying land/house</p> <p>11. Buying building materials/ machinery/equipment</p> <p>13. Buying inputs (seeds, fertilizers, pesticides)</p> </div> </div> <div style="display: flex; justify-content: flex-end; margin-top: 10px;"> <input style="width: 40px; height: 25px; margin-right: 10px;" type="text"/> <input style="width: 40px; height: 25px; margin-right: 10px;" type="text"/> <input style="width: 40px; height: 25px;" type="text"/> </div> |
|---|--|

| | | |
|--|---|---|
| <p>17. How much was the most recent loan application for? (P تازہ ترین قرض کی درخواست کی رقم (روپوں میں)</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>1. Less than 25,000</p> <p>2. 25,001 to 50,000</p> <p>3. 50,001 to 100,000</p> <p>4. 100,001 or more</p> </div> <div style="width: 35%;"> <p>write code</p> <input style="width: 30px; height: 25px;" type="text"/> </div> </div> | <p>18. How much is your household monthly loan repayment? آپ کے گھرانہ کی ماہانہ قرضے کی واپسی کتنی ہے؟ (روپوں میں)</p> <input style="width: 60px; height: 25px;" type="text"/> | <p>19. Has your household ever had a loan not approved کیا کبھی آپ کے گھرانے کے قرضے کی درخواست سے انکار ہوا ہے؟</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>1. Yes</p> <p>2. No</p> </div> <div style="width: 35%;"> <input style="width: 30px; height: 25px;" type="text"/> </div> </div> |
|--|---|---|

| | | |
|--|---|--|
| <p>20. What was the main reason the loan was not approved? قرضہ کی درخواست سے انکار کے سب سے اہم وجہ؟</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>1. Don't know</p> <p>3. Not enough income</p> <p>5. Other (Please specify)</p> </div> <div style="width: 48%;"> <p>2. Lack of collateral</p> <p>4. Risky occupation</p> </div> </div> <div style="display: flex; justify-content: flex-end; margin-top: 10px;"> <input style="width: 40px; height: 25px;" type="text"/> </div> | <p>21. Has your household ever taken a loan to overcome the losses from any extreme weather conditions such as flash floods or drought کیا آپ کے گھرانہ نے کبھی شدید موسمیاتی حالات جیسا کہ خشک سالی یا سیلاب سے ہونے والے نقصانات کو پورا کرنے کے لیے کبھی قرضہ لیا؟</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>1. No</p> <p>3. Yes, because of crop damage</p> <p>5. Yes, because of business loss</p> </div> <div style="width: 48%;"> <p>2. Yes, because of property damage</p> <p>4. Yes, because of livestock loss</p> <p>6. Yes, because of other reason (specify)</p> </div> </div> <div style="display: flex; justify-content: flex-end; margin-top: 10px;"> <input style="width: 40px; height: 25px;" type="text"/> </div> | <p>22. How much was the most recent loan application to overcome the losses from any flash flood or drought? تازہ ترین قرضہ کی درخواست (برائے سیلاب اور قحط سالی) کتنی رقم کے لیے تھی</p> <p>PKR</p> <input style="width: 60px; height: 25px;" type="text"/> |
|--|---|--|

23. Are you a recipient of Benazir Income Support Programme? کیا آپ یا آپ کے گھرانے کے کسی فرد کو بینظیرانکم سپورٹ پروگرام سے کسی قسم کی امداد ملتی ہے؟

1. Yes 2. No

☐

Section 7: Remittances

| 1. Type of remittance | 2. Received any remittances during last one year | 3. How much money you remitted [in PKR] during the last one year? | 4. How did you receive/sent the money? | 5. Where did you use the gift/transfers you received from different sources during last one year |
|-----------------------|---|---|---|---|
| Code | <p>گذشتہ ایک سال کے دوران آپ نے کہیں کوئی رقم بھیجی یا وصول کی؟</p> <p>1. Yes, 2 No</p> | <p>پچھلے ایک سال میں آپ نے کتنے پیسے بھجوائے</p> <p>(روپے)</p> | <p>رقم بھججنے/وصول کرنے کے لیے کون کون سے ذرائع استعمال کیے؟</p> <p>1. Through bank 2. Money services (western union) 3. Mobile money (easy paisa) 4. Other (specify)</p> | <p>گذشتہ سال کے دوران وصول شدہ رقم آپ نے کہاں استعمال کی؟</p> <p>1. Disaster response 2. Household consumption 3. Education 4. Savings 5. Business investments 6. House investments 7. Others (specify)</p> |
| 1 | Received in (abroad) | | | |
| 2 | Received in (Local) | | | |
| 3 | Paid out (Abroad) | | | |
| 4 | Paid Out (Local) | | | |

Section 8: Social Capital and Women Empowerment

| | | | | |
|---|--|---|--|--|
| <p>1. If your household is in urgent need of money to deal with some emergency, how many friends can you rely on to borrow money?</p> <p>اگر آپ کے گھرانے کو کسی قسم کی بنگامی صورتحال سے نمٹنے کے لیے پیسوں کی ضرورت ہو تو آپ کتنے دوستوں یا رشتہ داروں پر انحصار کر سکتے ہیں</p> <p>(تعداد لکھیں)</p> | <p>2. How many friends does your household have in your village you can rely on to borrow money?</p> <p>اس گاؤں / علاقے میں آپ کے گھرانے کے کتنے دوست یا رشتہ دار ہیں، جن پر آپ کا گھرانہ پیسے ادھار لینے کے لیے انحصار کر سکتا ہے؟</p> <p>(تعداد لکھیں)</p> | <p>3. How much in total do you think can be borrowed in short notice from your friends?</p> <p>فوری ضرورت کی صورت میں آپ کا گھرانہ ان دوستوں / رشتہ داروں سے کتنی رقم قرضہ کی صورت میں حاصل کر سکتا ہے؟</p> | <p>4. Can women in your household buy (access) insurance products with their free will (on their own)?</p> <p>کیا آپ کے گھر کی خواتین اپنی مرضی سے انشورنس کروا سکتی ہیں؟</p> <p>1. Yes → Sec. 9 2. No</p> | <p>5. In case, if women cannot decide on their own, who in your household will give permission?</p> <p>اگر آپ کے گھر کی خواتین یہ فیصلے خود نہیں کر سکتی ہیں تو ان فیصلوں کے لیے ان کو گھر میں سے کس کی اجازت درکار ہوگی؟</p> <p>1. Husband, 2. Father, 3. Son, 4. Brother, 5. Any other relative.....</p> |
|---|--|---|--|--|

| | | | |
|--------------|--|--|--------|
| | | | (روپے) |
| 1. Friends | | | |
| 2. Relatives | | | |

| | |
|--|-------------|
| | |
| | (کوڈ لکھیں) |

Section 9: Expenditure & Assets

| گھرانے کے اخراجات درج ذیل اشیا ۶ پر | | | | | |
|-------------------------------------|--|-----------------------------------|---|---|--|
| Section 9-A: Monthly Expenditure | | | | | |
| Sr. No | Sources How much did your household spend on the following items? | 1. Paid and consumed (PKR) | 2. Imputed market value of wages received in kind and consumed جنس کی صورت میں معاوضہ اور استعمال (PKR) | 3. Imputed market value Own Produced and consumed خود سے پیدا کی اور استعمال کی (PKR) | 4. Imputed market values Receipt from assistance, gift, dowry, inheritance or other sources تحفہ، امداد، جہیز یا وراثت میں ملی اور استعمال کی۔ (PKR) |
| 1. | Food | | | | |
| 2. | Clothing/shoes | | | | |
| 3. | Housing/Rent/Maintenance | | | | |
| 4. | Fuel and utilities | | | | |
| 5. | Insurance premium | | | | |
| 6. | Transport | | | | |
| 7. | Health | | | | |
| 8. | Education | | | | |
| 9. | Social functions | | | | |
| 10. | Leisure (tourisms etc.) | | | | |
| 11. | Other expenditures | | | | |

| | | | | | |
|----|-----------------|--|--|--|--|
| 12 | Savings | | | | |
| 13 | Loans repayment | | | | |

Section 9-B: Assets

| |
|---|
| 1. Does the household have following goods and items? کیا آپ کے گھرانے کے پاس درج ذیل اشیاء ہیں، اگر ہیں تو اُن کی تعداد ۔ |
|---|

| Sr. No | Items | Owned 1. Yes 2. No | Number of items |
|--------|---------------------|--------------------------|--------------------|
| 1 | Refrigerator | | |
| 2 | Television | | |
| 3 | Radio | | |
| 4 | Computer/laptop/Tab | | |
| 5 | Motorcycle | | |
| 6 | Car | | |
| 7 | Tractor | | |
| 8 | Livestock for sale | | |

| Sr. No | Items | Owned 1. Yes 2. No | Number of items |
|--------|---|--------------------------|--------------------|
| 12 | Land for farming for household consumption | | |
| 13 | Land for farming for saleable products | | |
| 14 | Fans | | |
| 15 | Air conditioner | | |
| 16 | Heater | | |
| 17 | Washing machine | | |
| 18 | Micro wave/Oven | | |
| 19 | Mobile phones | | |

| | | | |
|----|------------------------------------|--|--|
| 9 | Livestock for domestic consumption | | |
| 10 | Savings (in bank etc.) | | |
| 11 | Credit card | | |

| | | | |
|----|-----------------|--|--|
| 20 | Sewing machines | | |
| 21 | Stoves | | |
| 22 | Furniture | | |

Section 10: Education & Occupation – Male & Female age 5 years and above

| PERSON ID | 1. Can read in any language with Under-standing? کیا کسی بھی زبان میں سمجھ بوجھ کے ساتھ لکھ پڑھ سکتے ہیں؟ 1. Can read only 2. Can write only 3. -Can read and write Cannot read and write | 2. Ask each person about their educational background, and code as follows گہرانے کے ہر فرد سے اس کا تعلیم پس منظر پوچھیں اور طریقہ ذیل کے مطابق کوڈ کریں 1. Never attended school/institution 2. Attended school/ Institution in the past 3. Currently attending school/institution | 3. What was/is the highest class passed/enrolled? پاس شدہ/داخل شدہ سب سے اعلیٰ تعلیمی درجہ Less than class 1= 0, Class 1=1 Class 2=2, Class 3 =3, Class4 =4 Class 5=5, Class 6 =6, Class7=7 Class 8=8, Class 9 =9, Class10 =10 Polytechnic diploma = 11 Inter, FA/F.Sc./Com =12 Graduation & Higher =13 | 4. Did/do you any work for pay, profit or family gain during the last month, on any day? Yes =1 No =2 کیا گذشتہ ماہ کوئی کام کیا؟ اگر کوئی کام نہیں کیا تو کیا کوئی جاب، دکان یا کوئی کاروبار ہے | 5. What was the nature of work (Occupation) that you did? کام کی نوعیت | 6. What was the employment status? See below for codes. If code=4, go to Section 11:A کس حیثیت سے کام کیا؟ کوڈ کے لیے صفحہ کے آخر میں دیکھیں | 7. How much money In cash, did you earn during the last month? مابانہ آمدن (روپے) | 8 Income in kind, income from pension and from other sources (PKR) | 9 Is your business insured? کیا آپ کا کاروبار کا بیمہ ہوا ہے؟ 1. Yes 2. No | 10. What was the main source of finance in building this business? اس کاروبار کے لیے پیسے کس سب سے بڑا ذریعہ کیا تھا 1. Inheritance 2. Own savings 3. Banks 4. NGO 5. Sale of assets 6. Money lender 7. Partnership 8. Other (specify) |
|-----------|--|--|---|---|---|---|--|---|---|---|
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |

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| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |

| Codes For Question-5 (Employment Status) | | | | | |
|--|--|-------------------------|-------------------------|--|-----------------------------------|
| Non-agriculture | | | Agriculture & Livestock | | |
| 1. Employer | | | 5. Owner cultivator | | 8. Live Stock (only) |
| 2. Self employed | | 4. Unpaid family worker | 6. Share cropper | | 9. Hari (Employed in agriculture) |
| 3. Paid employee | | | 7. Contract cultivator | | 0. Other..... |

Section 11-A: Agriculture and Livestock

| | | |
|--|--|---|
| <p>1. Does your household conduct any farming activities during last 12 months? پچھلے بارہ ماہ کے دوران کیا گھرانے کا کسی فرد نے اکیلے یا کسی دوسرے گھرانے کے افراد کے ساتھ مل کر کوئی فصل پیدا کرنے کے لیے زمین کاشت کی یا کوئی مویشی پالے (گلہ بانی کی)۔</p> <p>1. Yes <input type="checkbox"/></p> <p>2. No → Section-13 <input type="checkbox"/></p> | <p>2. What farming activities does your household conduct? آپ یا آپ کا گھرانہ کس قسم کی زرعی سرگرمی کرتا ہے؟ درج ذیل میں سے کوڈ لکھیں</p> <p>1. It grows crops only, 2. It raises farm animals only <input type="checkbox"/></p> <p>3. It grows crops and raises farm animals, 4. Other (specify) <input type="checkbox"/></p> | |
| <p>3. How has your household been financing farming activities? آپ کا گھرانہ اس زرعی کام کے لیے پیسے کہاں سے حاصل کرتا ہے؟</p> <p>1. Saving from farming, 2. Savings from other business, 3. Borrowing from relatives/friends 4. Agricultural development bank, 5. Commercial Bank, 6. Other financial institution 7. NGO/Relief agency, 8. Sale of Assets, 9. Money lender, 10. Crop Loan Insurance 11. Other (please specify) <input type="checkbox"/></p> | <p>4. Did your household get information/advice from extension officers? کیا آپ گھرانے نے توسیعی افسران سے معلومات/مشورہ حاصل کیا؟</p> <p>1. Yes 2. No <input type="checkbox"/></p> | <p>5. Did your household get information/ advice through farmer-to-farmer extension کیا آپ کے گھرانے نے کسان کسان توسیع سے مشورہ حاصل کیا؟</p> <p>1. Yes 2. No <input type="checkbox"/></p> |

| | |
|--|---|
| <p>6. From which organization are the extension officers who visited/contacted your household? کسی ادارے کے توسیعی افسران نے آپ کے گھرانے کا دورہ/رابطہ کیا</p> <p>1. Government department, 2. Agriculture research station, 3. NGO, <input style="width: 40px; height: 20px;" type="text"/></p> <p>4. Other (please specify)</p> | <p>7. Have extension officers provided information on expected rainfall, floods, drought and temperature? (Multiple answers) کیا توسیعی افسران نے آنے والی بارش/سیلاب/خشک سالی یا درجہ حرارت کے بارے میں بتایا</p> <p>1. Yes expected rainfall), 2. Yes expected wind speed, <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/></p> <p>3. Yes expected temperature, 4. No</p> |
|--|---|

Section 11-B: Agriculture

| 1. What crops does your household grow? آپ کا گھرانہ کون کون سی فصلیں کاشت کرتا ہے۔ | 2. Average Annual Yield (kg) سالانہ اوسط پیداوار (کلو گرام) | 3. Does your household grow this crop for subsistence or does it sell parts of production? آپ کا گھرانہ یہ فصلیں اپنی ضروریات یا بیچنے کے لیے کاشت کرتا ہے۔ 1. Subsistence only 2. Sell, 3. Both | 4. Price per kg (PKR) in which it is available in the market at retail level قیمت فی کلو (پرچون کی سطح پر) | 5. Area of Plot (acres) کاشت کردہ رقبہ (ایکڑ) | 6. Irrigated Land Acres سیراب رقبہ (ایکڑ) | 7. Average annual cost per acre (PKR) سالانہ لاگت فی ایکڑ (روپوں میں) | 8. Net revenue (PKR) per acre خالص آمدن فی ایکڑ (روپوں میں) |
|--|--|---|---|--|--|--|--|
| 1. Wheat | | | | | | | |
| 2. Rice | | | | | | | |
| 3. Sugar Cane | | | | | | | |
| 4. Pulses | | | | | | | |
| 5. Vegetables | | | | | | | |
| 6. Mango | | | | | | | |
| 7. Bananas | | | | | | | |
| 8. Citrus | | | | | | | |
| 9. Other (specify) | | | | | | | |

Section 11-C: Livestock

| NOTE: If the HH had animals (Cattle, Buffalo, Camel, sheep, Goats, Poultry, and Fish etc) during the last 1 year, complete the table given below. | | | | | | | | |
|---|-------------------------|-------------------------------|--|---|--|--|------------------------------|--|
| Code | Animal | 1. Owned 1.Yes 2.No | 2. Expected Value of Presently owned animals (PKR) | 3. Expected Value of Owned animals 12 months before. (PKR) | 4. Value of the animals during the last 1 year | | | |
| | | | | | a. Sold/slaughtered home consumed (PKR) | b. Received as gift, inheritance etc (PKR). | c. Purchased (PKR) | d. Given away, Lost Stolen etc. (PKR) |
| | | | | | a | b | c | d |
| 1 | Cattle گاؤ / بیل | | | | | | | |
| 2 | Buffalo بھینس | | | | | | | |
| 3 | Camel اونٹ | | | | | | | |
| 4 | Sheep بھیڑ | | | | | | | |
| 5 | Goat بکری | | | | | | | |
| 6 | Horses گھوڑے | | | | | | | |
| 7 | Donkey گدھے | | | | | | | |
| 8 | Mules خچر | | | | | | | |
| 9 | Poultry مرغیاں وغیرہ | | | | | | | |
| 10 | Fish مچھلیاں | | | | | | | |
| 11 | Beehives مگس بانی | | | | | | | |
| 12 | Others دیگر | | | | | | | |

Section 12: Household Roster

| PERSON ID | 1. Household member Name گھرانہ کے ارکان کے نام، جو عام طور پر یہاں اکٹھے رہتے اور کھاتے ہیں۔ جواب دہندہ کے نام کے گرد سرکل بنائیں۔ | 2. Gender جنس 1. Male 2. Female | 3. Age عمر (مکمل سالوں میں) | 4. Marital Status ازدواجی حیثیت 1. Single 2. Currently married 3. Widowed 4. Divorced 5. Separated | 5. Disability کوئی معذوری لاحق ہے؟ 1. Yes 2. No→Q.7 | 6. If yes, then of what type? اگر معذور ہے تو معذوری کی قسم 1. Hearing Disability 2. Visual Disability 3. Speech Disability 4. Mental Disability 5. Lower Limb Disability 6. Upper Limb Disability 7. Other | 7. Sources of information about extreme weather conditions. شدید موسمی حالات کے متعلق آگاہی کے ذرائع 1. Television 2. Radio 3. Neighbors 4. Shopkeepers 5. Colleagues 6. Family members 7. None 8..Other..... specify | 8. Religion مذہب 1. Muslim 2. Christian 3. Hindu 4. Sikh 6. Does not want to disclose 7. Other (specify) | Only for under 5 Children 9. If less than five years old then has been given polio vaccine as per approved schedule? کیا اس بچے کو پولیو کے قطرے پلائے جا رہے ہیں 1. Yes 2. No |
|-----------|---|--|--------------------------------|--|--|---|--|--|--|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| 11 | | | | | | | | | |

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|----|--|--|--|--|--|--|--|--|--|
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |

Section 13: Housing

| |
|---|
| <p>1. How many rooms does your household occupy (excluding toilet and kitchen)? آپ کے گھر میں ٹوائیلٹ کے علاوہ کتنے کمرے ہیں؟ <input type="text"/></p> |
| <p>3. Does your dwelling has a separate kitchen? کہا آپ کے گھر میں کچن (باورچی خانہ) کی سہولت الگ سے موجود ہے؟ 1. Yes 2. No <input type="text"/></p> |
| <p>5. What is the main construction material of the walls? گھر کی دیواروں کو بنانے کے لئے کون سا میٹیریل استعمال ہوا ہے؟ 1. Brick/ cement, 2. Sheet/ wood, 3. Mud built, 4. Hay / bamboo 5. Block and steel 6. Other (specify) <input type="text"/></p> |

| |
|---|
| <p>2. How many rooms are only used for business? گھر کے کتنے کمرے کاروباری مقاصد کی لیے استعمال ہوتے ہیں؟ <input type="text"/></p> |
| <p>4. Does the household have an electricity connection? کیا آپ کے گھر میں بجلی کا کنکشن موجود ہے؟ 1. Yes 2. No <input type="text"/></p> |
| <p>6. What is the main construction material of the roof? . گھر کی چھتوں کو بنانے کے لئے کون سا میٹیریل استعمال ہوا ہے؟ 1. Cement, 2. Sheet/ wood, 3. Tile/wood, 4. Hay/bamboo, 5. Tin 6. Zinc, 7. Other (specify) <input type="text"/></p> |

7. What is the main source of drinking water?
 گھر میں پینے کے پانی کا سب سے بڑا ذریعہ کون سا ہے؟

| | |
|------------------------|----------------------------|
| 1. Piped Water, | 2. Hand Pump |
| 3. Motorized Pumping | 4. Close Well |
| 5. Open Well | 6. River/Lake/Pound/Stream |
| 7. Tanker/Truck/Vendor | 8. Mineral Water |
| 9. Filtration Plant | 10. Others |

11. During last 12 months have you spent any money to improve OR repair your household?
 1. Yes
 کیا گزشتہ بارہ ماہ میں آپ نے گھر کی مرمت یا بہتری کے لیے کچھ خرچ کیا؟
 2. No

13. Why did you undertake repair or improvement?
 گھر کی مرمت پر پیسے کیوں خرچ کیے؟

| | |
|---|---|
| 1. To make it look good | 2. To make more room for residential purposes |
| 3. To make space for business | 4. To make it resilient against for extreme weather conditions such as flash floods |
| 5. To create storage for water and food | 6. Other (specify) |

8. What type of latrine does the household use?
 آپ کا گھرانہ کس قسم کا ٹوائلٹ استعمال کرتا ہے؟

| | |
|--------------------------------|---------------------------------------|
| 1. No toilet in the household, | 2. Flush connected to public sewerage |
| 3. Flush connected to pit | 4. Flush connected to open drain |
| 5. Dry raised latrine | 6. Dry pit latrine |
| 7. Other..... | |

10. Overall condition of the house?
 گھر کی مجموعی صورتِ حال کیسی ہے؟

| | |
|------------------------------|--------------------------------|
| 1. Good, | 2. Partial renovation required |
| 3. Major renovation required | 4. Terrible |

12. How much money did you spend on the repair or improvement? PKR ____
 گھر کی مرمت یا بہتری پر کتنے پیسے خرچ کیے

| | | | | | | | | | | | | | |
|--|---|----------------------|------------|-----------------|--------------|--------------------|----------------|--------------------------|---|----------------------|------------------|---------------------|--|
| <p>15. If you wanted to buy/ construct a dwelling just like this today, how much money would you have to pay?</p> <p>اگر اس طرح کا گھر آپ کو آج کل بنانا پڑے تو آپ کے خیال میں کتنے پیسے خرچ ہوں گے؟</p> | <p>14. What was the source of money for the repair improvement مرمت/بہتری کے لیے استعمال کیے ہوئے پیسوں کا انتظام کہاں سے کیا؟</p> <table border="0"> <tr> <td>1. Bank loan</td> <td>2. Savings</td> <td>3. Money lender</td> </tr> <tr> <td>4. Relatives</td> <td>5. Housing finance</td> <td>6. Sold assets</td> </tr> <tr> <td>7. Grant from Government</td> <td>8. Aid from International organizations</td> <td><input type="text"/></td> </tr> <tr> <td>9. Aid from NGOs</td> <td>10. Other (specify)</td> <td></td> </tr> </table> | 1. Bank loan | 2. Savings | 3. Money lender | 4. Relatives | 5. Housing finance | 6. Sold assets | 7. Grant from Government | 8. Aid from International organizations | <input type="text"/> | 9. Aid from NGOs | 10. Other (specify) | |
| 1. Bank loan | 2. Savings | 3. Money lender | | | | | | | | | | | |
| 4. Relatives | 5. Housing finance | 6. Sold assets | | | | | | | | | | | |
| 7. Grant from Government | 8. Aid from International organizations | <input type="text"/> | | | | | | | | | | | |
| 9. Aid from NGOs | 10. Other (specify) | | | | | | | | | | | | |
| <div>PKR</div> | | | | | | | | | | | | | |

Annex XI - Frequently Asked Questions about the Demand Assessment

What is the goal of the Demand Assessment?

To help decision makers make strategic decisions that are crucial for setting up a national Fund for disaster insurance (e.g. size of the Fund, capitalization requirements, risk exposure, and level of payouts over time), a rigorous Demand Assessment was conducted for 1410 households across 5 districts was conducted.

There were three overarching goals for the Demand Assessment:

1. confirmation of weather-related events as a real threat to the resilience of low income communities in the five study areas,
2. assessment of the implicit and explicit demand for microinsurance to mitigate against weather-related risks, and
3. inform the fund design process to determine the optimal design option that would cater to the needs to vulnerable low-income communities.

Validation of disaster coverage: The choice of disasters for district appears to be driven by the responses in the survey (such as ‘change in average temperature’ and ‘speed of rainfall’). It is important that the selection of disasters for each district is validated through historical records of disaster incidence.

The selection of districts has been done with great care, as these are crucial to the success of the pilots. 11 districts had been identified based on the following criteria:

- The districts presents *medium* to *high* risk to pluvial flood
- To avoid misinterpretation of the insurance coverage with riverine flood, districts in the Indus Valley were avoided, for a successful pilot
- Historical rainfall datasets are available in the districts selected to develop/validate the index. 16 years of TRMM rainfall products are already available but should ideally be complemented by similar or longer ground rainfall observations in the selected districts.

- Beneficiaries profiles
- Availability of distribution channels
- Political preferences

In addition, weighted criteria were applied based on security situation of the district, ease of access, presence of distribution channels etc. From the 11 districts, stakeholders selected the 5 districts for the pilot – Charsadda, Poonch, Ziarat, Rawalpindi, Tharparkar. For a detailed discussion of the selection of hazards and districts, please refer to the document titled ‘Methodology, Technical Considerations, and Selection of Study Areas’ from February 2015.

In the Demand Assessment, the flashfloods related microinsurance has been suggested more relevant for Poonch and Charsadda districts and drought related microinsurance policies has been suggested relatively more appropriate for the districts of Tharparkar, Ziarat, and Poonch and also to some extent in Rawalpindi due to less availability of water. The flash flooding coverage for District Charsadda needs to be revisited since Charsadda is mostly affected by riverine floods and there is less likelihood of flash flooding.

Parts of Charsadda are effectively under the influence of 2 longer rivers (Swat River and Kabul River) tributaries of the Indus and some of the settlements and towns (e.g. Sareekh, Katozai) along those rivers might be more at risk of riverine flood than flash floods. But a great part of the districts is drained by smallest rivers with a drainage area almost completely included in the district boundaries. Main cities like Shabqadar, Charsadda and particularly Tangi (where the Demand Assessments were done) in our understanding could also face flash floods. This was also agreed with NDMA and PDMA last year when the districts and hazards were discussed and reviewed.

Similarly, drought coverage for the District Rawalpindi needs to be reconsidered due to less likelihood of this phenomenon.

Rawalpindi has experienced periods of prolonged dry periods which have resulted in drought like conditions in the past¹³, which is why we have developed a trigger level for drought. However, this trigger level of drought for Rawalpindi is relatively high which means that there will be a payout only in an extreme event – so even if there is a low likelihood, there is still a

¹³ To illustrate: Rawalpindi experienced a wet cycle from 2001-2007, followed by a drought from 2008-2012

probability of drought , and this probability has been catered for in the proposed insurance product. It is pertinent to mention here, that for this phase of project activity, MCII was asked to develop a first iteration of the proposed insurance product; future iterations of the insurance product can be refined after mutual consultation.

Identification of target population: There is also need to devise a mechanism by which low-income group communities (who are affected in case of hazard) are properly defined and identified with the support from ground data along with the satellite data. Since an 'across-the-board' approach will not be ineffective for identification of vulnerable population in case of hazard.

The identification of target population has been done using the information of the Benazir Income Support Programme (BISP). The BISP has developed the Poverty Scorecard and uses a number of socioeconomic variables to determine the poverty profile of each of the 27 million households across Pakistan that are classified as poor. In order to create better alignment with existing national institutions, and with the agreement of the NDMA, MCII has used BISP data and identified households in the surveyed communities with a score of 16.17 on the BISP poverty scorecard.

As opposed to a full scale disaster assessment where there is a need to establish vulnerabilities and exposure on the ground, for a parametric index insurance programme, not every single linkage between vulnerability type and hazard or specific location on the ground, needs to be established. Thus, the use of remote sensing data for hazard/vulnerability mapping purpose is considered of limited use within the framework of the development intervention that is being proposed.

A parametric trigger system relies on simplified assumptions in contrast to a holistic risk approach employed in a full scale disaster risk assessment. In the perspective of index insurance, (financial) exposure is linked to the number of beneficiaries, the intensity/frequency of an extreme weather event, and the payout level after an extreme weather event. This approach ensures that the development, administration, and distribution of the insurance product keeps overhead costs low, which in turn help keep the premium costs low, while still making business sense for the insurer.

In a parametric index insurance programme the policy holders are known by virtue of having registered for the policy with the insurer. Through the policy registration process, complete

information including the contact information of all policy holders is available with the insurer (and incase of distribution via BISP, through the NADRA database).

Sustainability of the fund: The key findings of the Demand Assessment like very low prevalence of insurance in the selected districts, premium payment considered to be an unnecessary expense, low readiness to pay insurance premium, and considered too expensive indicate that private insurance companies might be hesitant in launching micro weather insurance in Pakistan because it is not viable and sustainable for them. It further shows that the insurance framework will only be run with the support of huge subsidies from the government and by public sector insurance companies. This is a point of concern regarding sustainability of the disaster risk insurance mechanism.

Global experiences show that subsidies are warranted as part of a well-designed, focused strategy to establish and promote microinsurance; examples from Bangladesh, India, Ethiopia, Kenya demonstrate the importance of strong public support in the success of a pro-poor microinsurance initiative. In addition to facilitating access to microinsurance for the poor via premium subsidy, targeted government and donor support could counteract the high start-up costs of developing these products by investing in public goods, and key investments in client education, as well as capacity-building and technical support for local insurers to develop, launch and evaluate products.

Pro-poor, *Bottom-of-the-Pyramid* approaches such as the one MCII is proposing, offer insurers the opportunity to tap into, and develop markets that are unexplored, and have unlocked potential in terms of scale, market development. The recently launched pilot Crop and Livestock Insurance Programme is a collaboration between the PPAF, and a private sector insurer, and is a good example of a public-private partnership to develop new markets and, expand business opportunities.

Ability to pay: In terms of the amount of PKR to be paid as ‘premium per annum’, the findings indicate that 47% respondents are ready to pay up to PKR 1000/- as premium. There is an apprehension that the poor people especially in Tharparkar and other areas may face problem in paying such premiums.

Willingness-to-Pay, Ability-to-Pay are methodological tools used for the design of insurance programmes: these tools have been employed as part of the Demand Assessment to predict demand patterns for climate risk insurance as inputs to pricing and distribution decisions¹⁴ for insurance companies. These two tools have been used to

- facilitate the estimation of the capacity to pay of the target group
- find out the hypothetical monetary value of the disaster risk insurance programme
- determine how to achieve adequate risk cover for vulnerable, low-income individuals at an affordable price

Ability to pay is a subjective judgment predicated on an assumption as to what people ought to pay. The question: *‘How much would you like to pay per year (as premium) and for how many*

years?’ was asked to assess the ability to pay. More than 47% indicated the ability to pay up to 1000 PKR, 22% had ability to pay between 1-2000 PKR and 30% indicated that they could spend more than 2000 PKR as premium.

In the discussion of the proposed insurance contract in the main report, it is envisaged that a part of the premium would be paid by the policy holder (in two of the five districts, viz. Tharparkar and Charsadda) and the remainder of the premium would be subsidized through public funds. These subsidies would be essential at the start of the programme and can be phased out over time¹⁵.

The Demand Assessment provides a sound basis for understanding risk management practices, client demand, willingness to pay, and potential market for a climate risk insurance product. The results have been used to further refine the fund design options to be proposed to the Government of Pakistan, and to create a weather index microinsurance product to serve the needs of vulnerable communities and extend the financial safety net to them

¹⁴ See for example (Levy & Quigley 1993; Mills et al 1994; Donaldson et al 1995).

¹⁵ For PPAF’s crop and livestock insurance programme in Khushab and Talagang, beneficiaries had to pay 30% of the premium while the remaining 70% was subsidized by PPAF. There was no pay out to the

farmers for the rain fall indexed crop insurance as there were substantial rains during the season and no thresholds were triggered. However, there were claims settled for the livestock product and due to the demonstration effect created, the clients are now availing the product without any subsidy from PPAF.



ABOUT THE PROJECT

Funded by the Climate and Development Knowledge Network, the Munich Climate Insurance Initiative is supporting the Government of Pakistan, National Disaster Management Authority, to design a disaster insurance framework for Pakistan to help vulnerable, low-income communities rebuild lives and livelihoods in the aftermath of an extreme weather event.

TO FIND OUT MORE VISIT:

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