Developing a Disaster Insurance Framework for Pakistan
Fund Design Options

RECURRING NATURAL HAZARDS ERODE RESILIENCE

The people of Pakistan must regularly endure the destructive impacts of extreme weather events such as floods and droughts - climatic stressors that often devastate vulnerable communities. These stressors destroy homes and assets and lead to longer-term consequences such as lost livelihoods, worsening food security and deepening poverty. Each extreme weather event makes affected people more vulnerable, and with each successive flood or drought, their ability to rebuild their lives and livelihoods and respond to future loss events is further eroded.

A NATIONAL DISASTER INSURANCE FUND TO SUPPORT VULNERABLE LOW-INCOME PEOPLE

As part of the “Developing a Disaster Insurance Framework for Pakistan” project, Pakistan plans to set up a Fund to ensure that adequate financial resources are locked into place before disaster strikes. These resources would then be disbursed quickly to communities in need through climate risk insurance. In combination with other disaster risk management measures, insurance could increase the resilience of vulnerable, low-income people and bolster their ability to respond, adapt and recover from climate stressors such as a drought or a flood.
4 WAYS CLIMATE RISK INSURANCE CAN BUILD RESILIENCE

Climate risk insurance has the potential to reduce the catastrophic impact of disasters, enable a timely recovery and contribute to sustainable, climate resilient development:

1. By assessing weather risks as well as potential losses, and creating risk awareness, insurance can support climate risk management by mapping, analyzing, prioritizing and pricing risk.

2. By reducing vulnerability and incentivizing risk reducing behavior.

At the public and private level, insurance helps create a space of certainty within which investments and planning can be undertaken. This allows for climate-resilient investments in weather sensitive sectors such as tourism and agriculture.

3. Insurance provides security in the post-disaster period by providing reliable and timely financial relief for recovery of livelihoods and reconstruction.

4. Pro-poor approach to determining premium: Two options for average annual premium per policy based on risk vulnerability and socioeconomic data for the five study areas are proposed:

   - **Option 1:** PKR 1,473 is proposed to be the average annual premium using the payout of Pakistan’s social safety net programme as proxy.
   - **Option 2:** PKR 4,910 is proposed to be the average annual premium using Pakistan’s damage compensation programme as proxy.

   The insurance approach suggested here lies at the intersection of social protection and financial inclusion: it offers a distinctly pro-poor approach and proposes ‘smart’ subsidies that will be complementary to long-term social protection strategies of the Government of Pakistan.

   The following insurance solution is proposed:

   - **Insured hazards:** Excess of rainfall (flood), or lack of rainfall (drought) for Rawalpindi, Charsadda, Poonch and Ziarat; lack of rainfall (drought) for Tharparkar.

   - **Scope of insurance cover:** The insurance product is designed to cover two layers of risks: Catastrophe (high) risk layer, for extreme weather events that are less frequent but very severe, and a medium layer for events that are less severe but more frequent.

   - **Deductible:** None, as the product is a parametric weather index insurance policy.

   - **Distribution channel:** Since the Fund is being set up to insure low-income communities, the distribution network of the Benazir Income Support Programme or the Prime Minister’s Health Insurance Scheme may be utilized.

   - **The sum insured:**

     - **Option 1:** PKR 15,000 (approx. USD 145) per peril per annum, which is equivalent to 10 months of social safety net transfer (i.e. BISP).

     - **Option 2:** PKR 50,000 (approx. USD 476) per peril per annum

   INCREASING SOCIAL RESILIENCE, DECREASING POVERTY

Following an extreme weather event, the Fund will be able to make payouts quickly to communities in need through climate risk insurance; quick payouts mean that affected communities do not need to sell livestock and productive assets to rebuild, and thus avoid coping strategies that could lead them deeper into poverty.

The insurance approach suggested here lies at the intersection of social protection and financial inclusion: it offers a distinctly pro-poor approach and proposes ‘smart’ subsidies that will be complementary to long-term social protection strategies of the Government of Pakistan.
DEMAND ASSESSMENT BACKGROUND

To help decision makers make strategic decisions that are crucial for setting up a Fund (e.g. size of the Fund, capitalization requirements, risk exposure, and level of payouts over time) the project undertook a rigorous climate risk insurance demand assessment of 1410 households in Rawalpindi, Charsadda, Poonch, Ziarat and Tharparkar that are particularly prone to floods and droughts. The five study areas are inhabited by about 7.5 million people.

The goals of the demand assessment were to:

• Confirm that weather-related events are a real threat to the resilience of low-income communities in the five study areas; improve understanding about the weather-related risk communities face and the coping strategies they already employ to manage the associated loss and damage.

• Assess the implicit and explicit demand for microinsurance to mitigate against weather-related risks that is designed to benefit the chronic and the transitory poor in Pakistan.

• Use the findings to inform the fund design process to determine the optimal design option that would cater to the needs of vulnerable low-income communities.

DEMAND ASSESSMENT FINDINGS

The Demand Assessment findings reveal the severity of climate change induced vulnerabilities which low-income communities experience on almost a regular basis. These findings highlight the need for appropriate risk management measures to help vulnerable persons cope with the adverse effects of climate change on their lives and livelihoods.

Faced with frequent extreme weather events, households must deal with many constraints as they try to recover and recoup from a disaster. The distressed sale of productive assets, borrowing at high interest rates, or doing nothing because of a lack of financial resources, are some of the coping strategies that affected households will adopt in response to an extreme weather event. Often these very strategies will lead households deeper into poverty in the long run. By providing vulnerable individuals with risk transfer mechanisms, such as climate risk insurance, the vulnerability of at-risk individuals can be reduced over time.

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<thead>
<tr>
<th>DISTRICT</th>
<th>POPULATION</th>
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<tr>
<td>1</td>
<td>Poonch</td>
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<tr>
<td>2</td>
<td>Charsadda</td>
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<tr>
<td>3</td>
<td>Ziarat</td>
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<td>4</td>
<td>Tharparkar</td>
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<td>5</td>
<td>Rawalpindi</td>
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The results of the Demand Assessment in the five study areas revealed that 28 per cent of respondents were willing to purchase climate risk insurance. Based on this outcome, the project anticipates almost 247,000 HHs (20 per cent of the total HHs in the five study areas) would participate in a climate risk insurance program. The Demand Assessment also indicated that the majority of farmers thought that an annual premium of between PKR 1,000 - 2,000 (approx. USD 10-20) would be acceptable.

There would be a need to subsidize the premium based on the household’s socioeconomic status and vulnerability, particularly in districts with increased risk exposure to both floods and droughts. Public subsidies play a significant role in extending the financial safety net to low-income individuals by making insurance affordable for them. The amount of premium support per household depends very heavily on the appetite and cost considerations of the Government of Pakistan.

MCII recommends premium subsidy support for affected communities, commensurate with their vulnerability to natural disasters as well as their socioeconomic status. The premium subsidy of the fund is the aggregate amount of subsidies available if all 247,000 households participate in the insurance programme.

The unsubsidized portion of the premium will be paid by the individual, which is also important to create a behavior shift from being risk averse to risk aware.

To determine the subsidy amount:

1) The risk exposure and socioeconomic status of each district was identified. Based on the demand assessment Tharparkar and Charsadda are the most vulnerable districts, followed by Poonch and Ziarat. Rawalpindi is the least vulnerable.

2) Climate risks were layered into medium risk (probability of happening once in 10 years) and catastrophic risk (probability of happening once in 50 years) depending upon location and risk profile for each district.

### DISTRICTS AND THEIR SUBSIDIES

<table>
<thead>
<tr>
<th></th>
<th>Rawalpindi</th>
<th>Charsadda</th>
<th>Tharparkar</th>
<th>Poonch</th>
<th>Ziarat</th>
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<tr>
<td><strong>Medium Risk Layer</strong></td>
<td>No subsidy</td>
<td>60% subsidy</td>
<td>60% subsidy</td>
<td>30% subsidy</td>
<td>30% subsidy</td>
</tr>
<tr>
<td><strong>High Risk (CAT) Layer</strong></td>
<td>60% subsidy</td>
<td>90% subsidy</td>
<td>90% subsidy</td>
<td>60% subsidy</td>
<td>60% subsidy</td>
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1,233,838* is the total number of households in the 5 study areas

247,000 households (20%) are anticipated buy the climate risk insurance

(Business case assumption, participation rate between 10%-50%)

101,000 households in Tharparkar
146,000 households in Poonch, Ziarat,Charsadda, Rawalpindi

PKR 1,473
PKR 4,910

is proposed to be the average annual premium per policy determined by risk profiles, vulnerability, and socioeconomic data for the five study areas.

PKR 15,000
PKR 50,000
is the Sum Insured per policy for Tharparkar (drought only)

PKR 30,000
PKR 100,000
is the Sum Insured per policy for Poonch, Ziarat,Charsadda, Rawalpindi (drought and flash flood)

Total Annual Premium:
PKR 364 million or USD 3.5 million
PKR 1.2 billion or USD 11.4 million

Total Sum Insured:
PKR 5.9 billion or USD 56 million
PKR 19.6 billion or USD 186 million

* Figures are based on findings from the Demand Assessment
**TWO POTENTIAL FUND DESIGNS**

1. **PUBLICLY HELD**: Insurance underwriting and reinsurance capacity will be provided by government mandated national companies. This means the National Insurance Co Ltd. will evaluate the risk exposure of potential clients, decide the appropriate level of cover for the client and the premium levels. Pakistan Reinsurance Corp will provide reinsurance capacity to the Fund.

2. **PUBLIC PRIVATE PARTNERSHIP**: The Fund selects an insurance company (public or private) via a transparent, competitive bidding process that will help the Fund get best rates as well as terms and conditions for the transferred risk. Reinsurance capacity may be provided by national and/or international companies, as per the needs of the Fund.

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<tr>
<th>PUBLICLY HELD</th>
<th>PUBLIC PRIVATE PARTNERSHIP</th>
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<td><strong>ADVANTAGES</strong></td>
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<td>In line with the Government of Pakistan’s objective to fully utilize the public sector resources.</td>
<td>An open market, level-playing field, and free bidding process will be perceived as more transparent by all stakeholders and will possibly help the Fund get the best rates and terms and conditions.</td>
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<td>Preferred re/insurance rates and terms by virtue of accessing public sector resources.</td>
<td>Lesser operational and governance issues/concerns will emerge because the private sector is more experienced in microinsurance as compared to the public sector insurer and reinsurer.</td>
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<td>Better governmental control on re/insurance arrangements, and better public/media perception of the fund.</td>
<td>Local ownership of the scheme with a significant portion of the risk insured in the domestic market acts as a safeguard against price volatility in international reinsurance markets.</td>
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<td>Better acceptance because ownership of the initiative lies in “own hands”.</td>
<td>The public budget is not exposed to the high volatility associated with natural disaster losses.</td>
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<td>Public sector participation may serve lean processes.</td>
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<td><strong>DISADVANTAGE(S)</strong></td>
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<td>The fund may face governance issues and resource constraints if political commitment is weak.</td>
<td>Operational inefficiencies may arise as the Fund may have to deal with a larger number of insurance companies.</td>
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<td>A need for capacity development initiatives in the area of climate risk insurance.</td>
<td>Retaining risk domestically may result in higher costs because of fewer risk diversification options.</td>
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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:
www.climate-insurance.org

GLOSSARY

**Climate risk insurance**: Insurance that covers losses and damages caused by extreme weather such as flooding and drought.

**Microinsurance**: Simple insurance products that protect low-income individuals against specific perils, in exchange for regular premium payments tailored to their income and level of risk.

**Reinsurance**: Insurance purchased by an insurance company to cover potential losses that go beyond what the insurance company can carry.

**Risk layering**: The process of separating risk into tiers that allow for more efficient financing and management of risks.

**Parametric Index Insurance**: Insurance payments are made based not on a policy holder’s actual loss but on weather parameters reaching predefined thresholds (e.g. payments are made when rainfall exceeds a certain level).

**Premium subsidy**: A reduction in premium, funded by the government, that is provided to groups or individuals who may not be able to access insurance otherwise.