Frequently Asked Questions on the Fund Design

**Approach and Data**

1) **What is a parametric weather index insurance?**

Parametric weather index insurance is a type of insurance contract where payouts are made when predefined weather parameters cross certain thresholds (e.g. payments are made when rainfall exceeds a certain level), as opposed to indemnity-based insurance where claims are settled on the basis of a policy holder’s actual loss.

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. The payouts depend on the parametric triggers, which can be readily assessed, and not on actual losses which would have to be quantified – a time consuming, expensive process. This approach ensures that the costs for the development, administration and distribution of the insurance are kept low, which in turn helps to keep the premium costs low.

2) **Will the proposed insurance product solely rely on satellite data?**

Yes, for piloting the proposed insurance product MCII recommends that payouts are based on satellite data. A parametric weather index relies on disaster risk modeling in contrast to a full scale disaster risk assessment where there is a need to establish vulnerabilities and exposure on the ground, at individual level. Another reason why the insurance product relies on satellite data is the fact that rain gauges\(^1\) might not be present in all five districts\(^2\).

3) **How will space observation technologies be used?**

We usually recommend using TRMM/GPM with ground data for bias correction. GSMAPS is also a derivative of TRMM/GPM, thus GSMAPS and in-situ data is part of the methodology we recommend.\(^3\) The methodology we propose is scalable and flexible and it will be possible to bias adjustments at a later stage when and if ground data is available. At the present time, there are no weather stations in the five study areas, as we have been informed by the Pakistan Met

---

\(^1\) Based on in-depth consultations with the Pakistan Metrological Department (PMD).

\(^2\) A major constraint in the setting up of the crop, livestock microinsurance pilots launched by the Pakistan Poverty Alleviation Fund (PPAF), has been the lack of an adequate number of ground weather stations to cover the insured/insurable area. Therefore in order for the pilot to be implemented, 5 weather stations had to be installed in the pilot areas. These weather stations were financed and installed by PPAF in the pilot areas.

\(^3\) Please refer to page 62 of the report “Developing a Disaster Risk Insurance Framework for Vulnerable Communities in Pakistan – MCII Consortium Report” from phase 1 of the project.
Department, so one of the important questions at the time of implementation is going to be about who will finance, install, and maintain weather stations.

4) Will indices including VCI, NDVI, NDWI, KBDI be used in addition to the Standardized Precipitation Index (SPI) to assess drought impacts?

The two insurable hazards flash floods and droughts can be captured adequately using different types of simple but significant rainfall indexing models. There are manifold possibilities to capture flash floods and droughts; each model has its advantages and limitations. SPI has been recommended by WMO for drought monitoring and is commonly used around the globe. However, alternative models could be investigated in a next step, provided that the data required for such models meet the index design criteria of reliability, availability, and independence. The challenge will be to design and monitor the trigger, taking into account all different metrics proposed. The issue is not so much about assessing/monitoring drought as to provide consistent frequency quantification. If every single of those indices will be used, the same process as previously applies (burn analysis), but using many more indices and combination of indices. The additional value of such an exhaustive approach (many more indices, combination of indices), might not be very big. The methodology that we propose, is one that is accepted by the insurance industry (very important, as the insurer has to settle the losses) and is in line with international best practice. At the present time, there are no ground weather stations in the selected study areas, so the challenge would be to adjust for biases in the absence of reliable in-situ data. However, the methodology we propose is flexible and scalable thus modifications, based on local data availability and geography, can easily be undertaken once the climate risk insurance solution has been piloted.

**Target Population**

5) Who are the intended beneficiaries of the proposed Disaster Insurance Framework?

As defined by NDMA, the target beneficiaries for the project are the chronic and transitory poor of Pakistan who are regularly exposed to natural hazards.

6) How was the target population identified?

As advised by NDMA, the project has sought to align itself closely with Pakistan’s social safety net programme. The target population has been identified using data from the Benazir Income Support Programme (BISP). Using the BISP’s Poverty Scorecard, all such households who had a score of 16.17 (or lower) are considered as the target population for the purposes of the project.

---

In the discussion on indices, hazards and how to model them, MCII and DHI have kept SUPARCO and Pakistan Met Department involved from the beginning. The views from SUPARCO and PMD are reflected in the Pakistan Disaster Risk Profile report as well as in the recommended methodology.
7) **What are the main aspects of the insurance product that cater to a pro-poor focus of the coverage?**

Uninsured risk has substantial welfare costs, in the short run, and also in terms of perpetuating poverty. This initiative seeks to provide low income vulnerable individuals protection against flash floods and droughts which has not been done before. With every extreme weather event, the ability of vulnerable individuals to cope with the loss and damage that is typically associated with an extreme weather event is further eroded giving rise to disaster induced poverty traps.

The pro-poor aspects of the insurance product are:

- Product affordability – low premium volumes
- Efficiency of payouts – there is no time consuming claims assessment process, so policy holders receive their payouts within a short period of time
- Linkages with BISP – to further strengthen the safety net initiative
- Subsidy structure – to encourage the rate of insurance take-up among low-income individuals; linking subsidies with other disaster risk reduction measures to create more awareness among affected communities.

**Coverage of the Fund**

8) **For what natural hazards will the Fund provide coverage?**

The Fund will provide coverage against drought and flash floods. Both flash floods and droughts were confirmed by 1410 households surveyed during the Demand Assessment to be the hazards that have significant negative impact on their communities in the five pilot districts selected.

9) **Exposed communities in Pakistan face multiple natural hazards. How will the proposed Fund address the needs of communities where other disasters are concerned?**

The Fund embodies a modular approach to hazard selection. This means that the Fund design allows additional hazards to be added to the parametric weather index, which will enable the Fund to extend disaster insurance coverage over time, as it develops more capacity to address challenges of increasing complexity.

10) **How was the sum insured of PKR 15,000 determined for the climate risk insurance product in the proposed Disaster Insurance Framework?**

To determine the Sum Insured of PKR 15,000/policy/peril for target communities, a proxy with the Benazir Income Support Programme (BISP) data was used to propose a suitable level of protection for low income, vulnerable individuals. The calculation of the Sum Insured has been done by taking into account the assets, income and other socio-economic considerations that have been gathered directly from the surveyed households. The Sum Insured takes into consideration the affordability, whilst using the BISP as a reference. The BISP provides a cash transfer of PKR 1,500/month to households below the poverty line. The product could trigger a
maximum payout of PKR 15,000 which is equivalent to 10 months cash transfer, in the case of an extreme weather event.

**Premiums and Payout**

11) How were the proposed premiums determined?

To determine premium levels, the risk exposure, the socioeconomic status, as well as the vulnerability of each of the districts (Tharparkar, Charsadda, Poonch, Ziarat and Rawalpindi) were identified based on the data gathered during the Demand Assessment, and by corroborating this data with the Poverty Scorecard and Household Census data. The recommendations for the proposed subsidy structure were determined by:

- The findings of the Demand Assessment which underscore that Tharparkar and Charsadda are the most vulnerable districts, followed by Poonch and Ziarat; Rawalpindi is more resilient in comparison with the other four study areas.
- 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.

12) Experience suggests that communities with high poverty levels are often not willing/able to pay. How is this addressed?

It is understandable that communities with high poverty levels would choose to spend money on only the most essential of items. Recent developments in the area of microinsurance in Pakistan demonstrate that once affected communities see the benefit insurance provides them then the insurance take up rates show growth despite poverty levels. Therefore, it is all the more important to design a product that can add value for them. To illustrate: for the Pakistan Poverty Alleviation Fund’s crop and livestock insurance program in Khushab and Talagang, beneficiaries paid 30% of the premium while the remaining 70% was subsidized by the Pakistan Poverty Alleviation Fund (PPAF). There was no payout to the farmers for the weather-index based crop insurance, as no payouts were triggered despite substantial rains during the season. However, claims were settled for the livestock product and due to the demonstration effect created, low income persons are buying the insurance without availing any subsidy from PPAF.

MCII has proposed an insurance solution where the premium has been kept as low as possible and the payout can make a small but tangible contribution to the welfare of disaster-affected households. A subsidy structure for the Fund has also been proposed, as subsidies are essential to removing barriers for low-income individuals and improving their ability to access climate risk insurance.
13) How will the insurance be distributed to beneficiaries?

To ensure a transparent distribution mechanism to effectively reach affected communities in the shortest possible time after the impact of an extreme weather event, it is recommended that the Benazir Income Support Programme (BISP) network is used. Closer alignment of the Fund with the social safety net programme would present an opportunity for insurance (especially when it is publicly subsidized) to potentially fill in some of the gaps of weak safety nets, lending more credibility to the overall system of social protection.

Risk Landscape

14) Have you taken into account the existing disaster risk assessment initiatives or the body of knowledge that already exists in Pakistan?

Yes. In 2014, MCII produced the “Pakistan Disaster Risk Profile” report which describes the disaster landscape in Pakistan and, then, re-examines the components of risk, their purpose and their measurement in risk assessment processes. The Pakistan Disaster Risk Profile provides an analysis of existing disaster risk assessment initiatives in Pakistan and makes recommendations to support informed risk reduction strategies as well as to formulate a specific risk insurance fund for the most vulnerable communities.
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