

## The promise of parametric insurance

The warmest year on record was 2023. A report estimated that losses from natural disasters amounted to \$280 billion in 2023, of which only about \$100 billion was insured. The gap in insurance coverage was particularly wide between developed and developing economies. With the world experiencing a surge in extreme weather events, the insurance industry needs to enhance disaster resilience by devising a number of alternative methods of coverage.

At present, the globally accepted method of disaster risk reduction is to transfer risk through indemnity-based insurance products, which require physical assessment of damage for payouts. However, the past is no longer a precedent for what could follow. When calamities such as cyclones, floods, tsunamis, and storms hit large populations and wipe out settlements, especially of the economically disadvantaged communities who have little record of their assets, it becomes difficult to verify the losses.

### Changing course

In this context, several insurance products based on the parameters of a weather event are needed. In these, payments are triggered based on real-time measurements such as rain of more than 100 mm per day for two days in succession, or specific flood levels, and wind speed. For such 'parametric' products, payments are made regardless of actual loss or physical verification. Disaster-prone island countries have largely shifted from the risk retention model and embraced such insurance for climate adaptation. Over time, this has built trust between states and insurers, leading to more reasonable pricing and trigger-payout combinations.

Thus far, insurers have been offering standardised parametric products only for low frequency, high-impact disasters such as earthquakes, cyclones, and hurricanes. In 2023,



**Safi Ahsan Rizvi**

Indian Police Officer  
is Adviser, National  
Disaster Management  
Authority

Given South Asia's reputation as the world's most 'climate-vulnerable zone', India could consider parametric products

for instance, after a 6.8 magnitude earthquake struck Morocco, the country received \$275 million parametric insurance cover arranged with the help of the World Bank. High frequency but low-impact disasters such as landslides, rain, and heat were overlooked, but the consequences of climate change are slowly changing that.

In India, one of the earliest uses of parametric policies was crop insurance, initiated by the government some years ago. The successful Pradhan Mantri Fasal Bima Yojana is based on verification of loss, while a new parametric product, the Restructured Weather Based Crop Insurance Scheme is based on threshold limits, not requiring field verification.

Over the years, the private insurance industry in India has witnessed a rising number of offers of parametric products, customised for States, corporations, self-help groups, and micro-finance institutions. They insure disasters such as extreme precipitation, which is an endemic issue in the north-east; cyclones, which are a standard occurrence in coastal States; and extreme heat, a suddenly prominent and much-published hazard.

Who should bear the burden of paying premiums for parametric insurance coverage? Nagaland was the first State to buy a parametric cover for extreme precipitation in 2021. Based on lessons learned, it has tendered for the second improved version by fixing an absolute annual premium, duration and rate-on-line, allowing bidders to compete over lower threshold limits and maximised payouts. It has imaginatively used the India Meteorological Department's credible supply of data on precipitation for tehsil-sized grids, opening the doors for other States to consider similar products for insurance against cyclones, wind, and rain.

The Co-operative Milk Marketing Federation in Kerala too has implemented parametric insurance for dairy farmers for lower milk yields due to heat stress to cattle. Some non-profits and

micro-finance institutions have also worked with private insurers to implement daily payouts to workers who lose wages due to excessive heat, based on pre-defined temperature and moisture triggers. Some large corporates have initiated parametric products for cyclonic winds and high waves at competitive prices, using wind speed, cyclone tracks, and storm surge data. The recent impact of heavy rains in West Bengal, Meghalaya, Manipur, and Mizoram in the aftermath of Cyclone Remal underscores the need to consider such parametric insurance as a possible means to reduce the financial burden of the State.

### Ensuring effective use

For governments to ensure effective use of parametric products, five factors are essential: precise thresholds and proper monitoring mechanisms; experience sharing between governments to incorporate lessons learned; following the mandatory bidding process for transparent price discovery; a widespread retail payout dissemination system; and encouraging premium payment by households in the long term. While this is more difficult in poorer populations, parametric insurance for earthquakes in New Zealand and Turkey has shown that it can be done.

India is uniquely placed for the use of such products, given that it has the Aadhaar-based payment dissemination system. Aided by multilateral institutions, the Pacific and Caribbean Catastrophe Risk Insurance Companies have displayed regional pooling of risk and have successfully implemented parametric contracts with the insurance sector. Given South Asia's reputation as the world's most "climate-vulnerable zone", India and its neighbourhood could consider such products, pool their risks collaboratively, and strike better bargains with the world's largest insurance companies.

### Question -1) What is the main issue discussed in the passage?

- A. The increasing frequency of natural disasters.
- B. The financial impact of natural disasters on insurance companies.
- C. The need for new methods of insurance coverage in response to climate change.
- D. The role of governments in managing natural disasters.

### Question -2) According to the passage, what is a significant challenge for traditional indemnity-based insurance products?

- A. They are too expensive.
- B. They require physical assessment of damage.
- C. They are not widely accepted.
- D. They do not cover natural disasters.

**Question -3) What is the primary advantage of parametric insurance products mentioned in the passage?**

- A. They are less expensive than traditional insurance.
- B. They provide immediate payouts without verification.
- C. They cover a wider range of natural disasters.
- D. They are customized for specific regions and hazards.

**Question -4) Which of the following is an example of a parametric insurance product in India mentioned in the passage?**

- A. National Crop Insurance Programme.
- B. Pradhan Mantri Fasal Bima Yojana.
- C. Restructured Weather Based Crop Insurance Scheme.
- D. Cyclone Remal Insurance.

**Question -5) What steps are suggested for governments to ensure effective use of parametric insurance products?**

- A. Implementing a detailed damage assessment process.
- B. Increasing insurance premiums for high-risk areas.
- C. Setting precise thresholds and monitoring mechanisms.
- D. Offering subsidies for parametric insurance premiums.

**Question -6) How has the insurance industry in India responded to the need for climate adaptation according to the passage?**

- A. By increasing premiums for high-risk areas.
- B. By reducing coverage for low-impact disasters.
- C. By embracing parametric insurance for climate adaptation.
- D. By partnering with international insurance firms.

**Thank you for attempting!!!**

**[CLICK HERE](#) to join our telegram channel**