



# Parametric Insurance for Disaster Risk Reduction

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## Why in News?

Himachal Pradesh faced over **20 flash floods** along with [landslides](#) and [cloudbursts](#), highlighting the unpredictability of [extreme weather events](#) due to [climate change](#) and **rising disaster risks in India**.

- Between **2019 and 2023**, India suffered over **\$56 billion** in losses due to weather-related disasters. In this context, [parametric insurance](#) is emerging as a quick and transparent tool for managing climate-related risks.

## What are the Key Statistics Related to Rising Disaster Risks in India?

- India recorded **764 major natural disasters** since **1900**, with **nearly 50% occurring after 2000**, reflecting increased climate volatility.
  - As per **World Bank**, India's [drought-prone area](#) has increased by **57%** since 1997, while instances of heavy rainfall have risen by almost **85%** since 2012.
- The [Reserve Bank of India \(RBI\)](#) estimates that up to **4.5% of India's GDP could be at risk by 2030**, due to lost labour hours from extreme heat and humidity.
  - India's climate-related losses accounted for **almost 25% of all such losses in the Asia-Pacific** during this period — the **highest in South Asia**.
  - Considering the growing frequency, intensity, and economic burden of such disasters, there is an urgent need to institutionalize innovative insurance solutions.

## What is Parametric Insurance?

- Definition:** A type of insurance where payouts are **triggered automatically** when predefined parameters (**e.g., rainfall, temperature, seismic activity**) cross a set threshold.
  - Unlike **traditional insurance** that requires **physical loss assessment**, parametric insurance **provides** payouts based on predefined weather triggers (rainfall or wind speed), enabling **faster, hassle-free compensation, especially useful during large-scale disasters**.
- Related Case Studies:**
  - Rajasthan and Uttar Pradesh** use a **water balance index** to protect **women small-holder farmers** from drought. Automatic loan support was provided.
  - Nagaland** became the **first state in India** to purchase a **multi-year parametric cover** using disaster mitigation funds, for landslides and extreme rainfall.
  - Globally, countries in **Africa, the Pacific Islands, and U.K.** have used parametric products to cover everything from droughts and floods to cyclone winds and flood depths

## How Parametric Insurance can be Integrated in Disaster Risk Reduction Framework?

- **Integrate Parametric Models into State Disaster Plans:** Encourage states to adopt **“Smart Cover for Smart States”** using parametric policies under State Disaster Response Fund/ Disaster Management Fund.
- **Expand Sector-Specific Coverage:** Scale up insurance in agriculture (that can help farmers in drought prone as well as flood prone areas), renewable energy, transport, and MSMEs to prevent cascading economic shocks.
- **Develop Climate-Linked Microfinance Products:** Financial institutions can design policies where loans are auto-covered during weather shocks.
  - **Promotes “Insurance that thinks ahead”** for vulnerable borrowers like smallholder farmers.
- **Promote Public-Private Partnerships:** Collaborate with **reinsurers, agri-tech firms, and startups for better models and outreach.**

## Conclusion:

Parametric insurance transforms disaster response from **reactive compensation to proactive protection** building upon [Sendai Framework for Disaster Risk Reduction](#), ensuring both financial resilience and climate justice in a warming world.

## Related Keywords for Mains:

- **Climate Change & Disaster Resilience**
  - **“Predictable Unpredictability”:** Climate extremes are known risks, not black swans.
  - **“From Rescue to Resilience”:** Shift from reactive relief to proactive preparedness.
  - **“Mitigation is investment, not expense”:** Climate spending as economic prudence.
- **Parametric Insurance & Climate Finance**
  - **“From Loss Assessment to Loss Anticipation”:** Forecast-based financial security.
  - **“Liquidity is the first relief”:** Speedy financial flow post-disaster ensures recovery.

## UPSC Civil Services Examination Previous Year Question (PYQ)

### Mains:

**Q.** Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. (2020)

**Q.** Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters. (2019)

**Q.** Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing ‘Sendai Framework for DRR (2015-30)’. How is this framework different from ‘Hyogo Framework for Action, 2005’? (2018)