

# Parametric Insurance Solutions for All



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## INTRODUCTION

# Universal Extreme Heat Protection: Will India's Insurance Sector Lead?

By Mihir R. Bhatt, All India Disaster Mitigation Institute (AIDMI), India

The All India Disaster Mitigation Institute (AIDMI) engages in climate change adaptation and mitigation, humanitarian action, and disaster risk reduction in India and its neighbouring countries. Our teams work in the field with vulnerable populations including extreme heat-affected people, to explore the ideas of risk identification and pooling, and how best to devise ways in which their lives can be made less vulnerable.

The role of insurance companies in mitigating disasters is vital. They hold the safety net that allows vulnerable policyholders to withstand, endure, and recover from disasters. Yet, there is a huge gap between what the policyholders need, and what the insurance companies provide. Bridging this gap requires communication, creativity, pro-activity, and boldness from both parties. There is a not only a dire need to redesign extreme heat products, but an opportunity to build holistic and humanizing insurance products by adding aspects of health, wealth, and happiness into consideration as ways to reduce the vulnerability of affected populations.

There is a greater need for insurance companies to understand their clients, their circumstances, and their needs. Their products too must reflect these differences. For example, farmers who can rush farm products to storage during or before extreme heat and farmers who cannot use different approaches. This issue of mobility also applies to



*Increasing access to affordable healthcare services and insurance for heat-related illnesses is crucial for vulnerable workers. A street vendor in Kolkata, West Bengal, India, faces daily exposure to extreme heat. Photo: AIDMI*

construction workers and transport vehicle owners. For example, construction workers employed within a factory or building and those who are outdoors, under the sun, have different cooling needs and insurance protection needs. Similarly, the transport workers who paddle three-wheel cycle and drivers of super deluxe bus both need insurance protection but of different kind. And this difference is not studied.

The focus of insurance companies on protecting property alone from extreme heat is short-sighted and unfair. Several family farmers in Madhya Pradesh received no insurance pay-outs after the scorching summers of 2023 and 2024 despite devastating damage to crops, health, and livelihood. Because per se there was limited loss of crop but loss to health agriculture related

incomes was severe, but they are not part of crop insurance.

As our planet gets hotter year after year, it is in the interests of insurance companies to support measures and products that promote risk-reduction and build resilience among small businesses in India. Insurance companies, in fact, the entire risk transfer sector needs to embrace nature-positive insurance measures that generate new transformative green, clean, and well-protected assets and income for its policyholders.

At a planning meeting for sustaining coastal mangrove plantations across coastal Odisha, held on July 26, 2024, a local participant rightly observed that companies do not have to wait for the devastation after extreme heat to activate insurance policies – that is short-sighted and counter-



productive thinking. Instead, insurance companies should be active in building the ark that saves communities from devastation, and focus on ways that lead to a cooler, more climate-resilient India.

More profits from brown and black insurance to green profits from green and clean insurance for prevention is needed, and what they will look like must be designed and detailed now. Current insurance covers current assets that have a large carbon footprint and are unsustainable. Such as current agriculture based on residue, long-distance fertilizers, and so on. While organic, local or natural manure assets small or family-scale agriculture is not possible by insurance.

As ethical spending and consumer opinions push for the greening of insurance activities, the issue of greenwashing by insurance companies was raised at Adaptation Research Alliance (ARA) on August 1-2, 2024 in Bangkok, Insurance companies have the ability and the duty to actively design, pilot, demonstrate, and push for green adaptation and mitigation measures

across key economic sectors, beginning today.

To start with, what measures can the insurance companies take before the summer of 2025 before the idea of extreme heat insurance becomes a mockery? When human survival itself is on the line, there is great urgency in ensuring extreme heat protection is available to all those who seek it, and within reach of those who have been left out. Inclusivity can reward the people as well as the insurance companies, if there is dialogue, and a desire to design and implement creative solutions to this growing and universal problem.

This global crisis of extreme climate is neither new nor sudden. We are witnessing a rise in risk due to extreme climate, and a fall in resilience the world over. This is self-evident, and a ground reality for many populations across the globe. However, insurance companies have yet to adapt to the mushrooming ground realities of climate change, and the populations it increasingly affects.

If insurance businesses operate on risk assessment, and if the

foundation of all their investments and business plans and possible profits depend on insurance studies, data analysis, and verification, it is in their interest to better understand the ground reality of their policy holders, listen to their voices, and expand their business model towards building resilience, reducing vulnerability, and increasing inclusivity.

Insurance companies in India have an opportunity to show leadership, and demonstrate to the world that they can not only design a universal extreme heat protection policy in partnership with the people, the government, and other stakeholders, but implement it for the protection of all citizens of India.

Furthermore, much along the lines of the International Solar Alliance, which promotes the use of solar energy in so-called sunshine countries to reduce dependency on fossil fuels, India can pioneer an Extreme Heat Insurance Alliance to partner with countries facing vulnerability to extreme heat to protect its populations, and to find solutions to reduce risk and build resilience. ■

## DISASTER RISK REDUCTION

# Developing and Upscaling Innovative Parametric Insurance Solutions

By *Shishir Agarwal*, Senior Consultant Disaster Risk Financing and Risk Transfer, National Disaster Management Authority (NDMA), India

As climate unpredictability rises and natural disasters grow in frequency, traditional insurance models often fail to deliver prompt and sufficient relief. This gap underscores the importance of pioneering solutions like parametric insurance, which is emerging as a

pivotal tool for disaster risk management. Unlike conventional indemnity insurance which compensates based on actual damage and necessitates extensive assessments, parametric insurance offers predefined payouts triggered by specific events. For instance, if a

cyclone reaches a certain wind speed or rainfall surpasses a set threshold, payments are automatically initiated. This innovative model ensures quicker claim processes and provides timely assistance to affected communities, significantly reducing administrative delays.

India's large population, particularly those reliant on agriculture, faces acute vulnerability to climate disruptions. In such contexts, fast financial aid can mean the difference between recovery and enduring economic hardship. With its swift, transparent, and data centric approach, Parametric Insurance fills the void left by slower, traditional models, offering immediate financial relief when it's most needed.

### Progress and Initiatives in India

India is progressively embedding parametric insurance into its disaster management practices. The Pradhan Mantri Fasal Bima Yojana (PMFBY) incorporates parametric triggers to support farmers facing crop losses due to adverse weather. Furthermore, stakeholders are now investigating broader applications of this insurance model in areas such as infrastructure and property.

The National Disaster Management Authority (NDMA) has been interacting with various stakeholders in discussing the adoption of these solutions. Through recent workshops and strategic collaborations with international bodies like the World Bank and Asian Development Bank (ADB), NDMA is attempting to generate policy initiatives to scale up Disaster Risk Financing options in India including parametric insurance.

A standout initiative comes from Gujarat's Self-Employed Women's Association (SEWA), which developed a parametric insurance scheme to protect women in informal employment from climate shocks, such as extreme temperatures. These policies trigger payouts when specific weather criteria are met, helping women maintain financial

*Embedding parametric insurance into disaster risk strategies requires collaboration among government agencies, insurers, development partners, and local communities.*

stability during adverse conditions. This model exemplifies how parametric insurance can bolster economic resilience and safeguard livelihoods, inspiring similar projects across the nation.

### Challenges and Solutions

Despite its promise, the widespread implementation of parametric insurance faces several obstacles:

- Data Accuracy:** Reliable parametric insurance depends on precise data. Investment in cutting-edge data collection and analysis technology is essential to ensure accurate triggers and trustworthy payouts.
- Regulatory Adjustments:** Insurers consider existing insurance regulations in India as suited to indemnity-based models. Adapting the regulatory framework to embrace the unique payout mechanisms of parametric insurance may be necessary for broader adoption.
- Community Trust and Awareness:** Educating potential policyholders on the operation of parametric insurance is crucial for acceptance. Comprehensive educational initiatives and platforms that promote awareness will be key to fostering trust and driving usage.

Expanding parametric insurance beyond agriculture could offer multifaceted risk management solutions. Integrating coverage for infrastructure, property, and even public health crises would contribute to national resilience. Moreover, technology plays an indispensable role, with satellite imagery, AI predictive models, and IoT sensors enhancing risk assessments and automating policy activations. India can also benefit from global best practices. Countries like Mexico and Caribbean nations have successfully employed disaster risk insurance pools and catastrophe bonds. Adapting such strategies to India's context, supported by partnerships with global reinsurers and financial institutions, can provide a sustainable expansion model.

### A Call for Collective Action

Embedding parametric insurance into disaster risk strategies requires collaboration among government agencies, insurers, development partners, and local communities. The recent workshops and collaborative efforts led by NDMA indicate significant progress. Continued commitment from policymakers, investment in data and technological advancements, and grassroots engagement are vital for these models to thrive and become a cornerstone of India's disaster risk financing framework.

Parametric insurance holds the promise of rapid, reliable support, empowering vulnerable communities to rebuild more resiliently after natural disasters. With sustained efforts, it could soon form a fundamental part of India's comprehensive disaster resilience strategy. ■

# The Journey and Lessons of AIDMI's Risk Transfer and Insurance

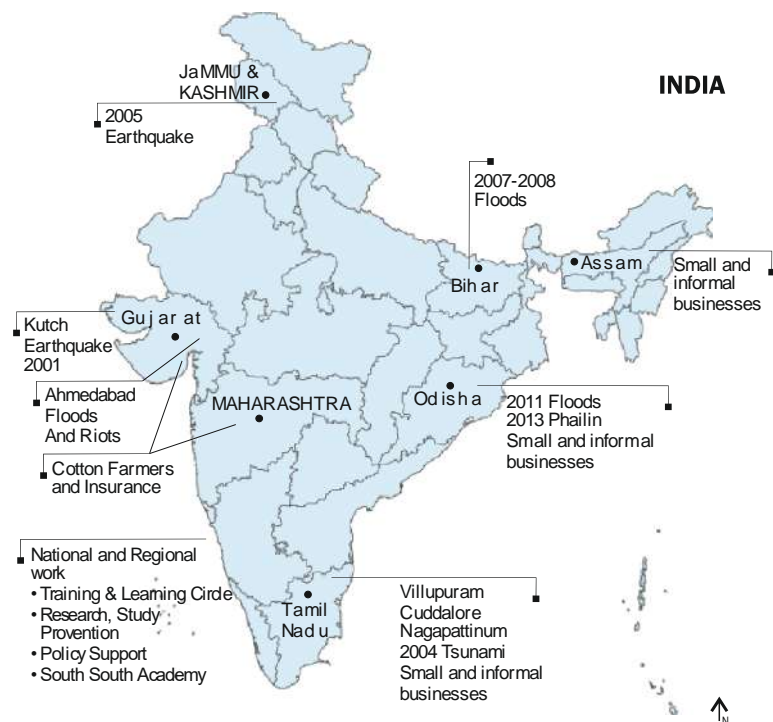
By Vishal Pathak, All India Disaster Mitigation Institute (AIDMI), India

AIDMI has been a pioneering organization in the field of disaster risk management, with a particular focus on risk transfer through insurance. AIDMI has worked extensively to promote microinsurance, parametric insurance, and other innovative financial instruments that support vulnerable communities manage the financial impact of disasters and providing evidence on what works and what not for policy support. Here's an overview of AIDMI's journey with risk transfer through insurance, along with key lessons learned.

## AIDMI's Journey with Risk Transfer through Insurance

1. **Identifying the Need for Insurance in Disaster-Prone Areas:** AIDMI recognized that traditional disaster relief and recovery methods, though important, were often insufficient to address the long-term financial needs of vulnerable communities, particularly in the aftermath of frequent natural disasters. These communities lacked access to tools that could help them recover quickly and reduce their vulnerability to future risks. Insurance was identified as a potential solution for risk transfer.
  - **Key Lesson:** Understand local vulnerability: Tailoring insurance to local contexts is essential. Vulnerable populations are often disproportionately affected by disasters, and traditional insurance mechanisms are not always accessible or appropriate for these groups.
2. **Microinsurance is typically low-cost and provides coverage for specific risks, such as floods, earthquakes, or cyclones.** AIDMI focused on making insurance affordable and accessible to people who are excluded from conventional insurance markets.
  - **Key Lesson:** Affordability and accessibility are critical: For insurance to be effective in disaster risk reduction, it needs to be affordable, with low premiums that vulnerable communities can pay. Insurance products need to be simple and easy to understand, with minimal documentation requirements.
3. **Partnerships with Insurance Providers and Governments:** AIDMI worked to create partnerships with both insurance providers and governments to develop and scale insurance products. Through these partnerships, AIDMI helped design microinsurance products that were not only affordable but also offered practical support for post-disaster recovery. The collaboration with insurers was key to overcoming barriers to coverage and establishing a market for low-cost insurance.
  - **Key Lesson:** Partnerships and collaboration are key: Working with insurers, governments, and local institutions is essential for creating a sustainable and effective risk transfer mechanism. Governments can provide enabling policy environments, while insurers offer technical expertise, and local organizations ensure community engagement and uptake.
4. **Introducing Parametric Insurance Models:** AIDMI has been instrumental in promoting parametric insurance, which is based on predefined parameters or triggers (such as rainfall levels, earthquake magnitudes, or wind speeds). This type of insurance is more straightforward to administer because it does not require proof of loss, which can be a barrier in post-disaster scenarios. Instead, payouts are made based on the occurrence of a specific event, making the process faster and more transparent.
  - **Key Lesson:** Parametric insurance offers speed and simplicity: This type of insurance can be more effective in disaster situations because it avoids the often lengthy and complicated claims process. It provides quick payouts, which are crucial in the immediate aftermath of a disaster.
5. **Designing Community-Centric Insurance Solutions:** AIDMI emphasized the importance of community participation in the design and implementation of insurance products. The involvement of the community ensures that the products meet local needs and are trusted by those who will benefit from them. AIDMI's approach included educating communities about the value of insurance and helping them understand how it could protect their assets and livelihoods in the face of disasters.
  - **Key Lesson:** Community ownership and trust are essential:

## Spread of AIDMI's Risk Transfer and Insurance Work



AIDMI is welcoming to work together for promoting and strengthening [risk transfer and insurance](#) for poor and vulnerable populations which is aligned with the local implementation of SFDRR, NDC, SDGs, and India's National Disaster Management Plan.

Insurance products are more likely to succeed when they are co-designed with communities. Community participation builds trust, increases uptake, and ensures that the insurance products meet real needs.

6. **Promoting Financial Literacy and Awareness:** One of the barriers to insurance uptake in vulnerable communities is a lack of understanding about how insurance works. AIDMI addressed this by conducting awareness campaigns and financial literacy programs. These programs helped communities understand the benefits of insurance, how to access it, and how to make claims.
  - **Key Lesson:** Financial literacy is crucial: Even affordable and well-designed insurance products will

not be effective if people do not understand how they work or perceive them as unreliable. Providing education and awareness is essential to creating a culture of insurance adaptation.

7. **Piloting and Scaling Insurance Programs:** AIDMI initially focused on small-scale pilot projects to test the viability and effectiveness of insurance products in disaster-prone areas. These pilots allowed the organization to refine the products, address implementation challenges, and gather data on their impact. Based on the success of these pilots, AIDMI capture the learning and share with the decision making bodies for possible expanding coverage in more relevant areas.

- **Key Lesson:** Pilots are essential for testing and scaling: Small-scale pilots are critical for refining products and understanding their impact on the ground. These pilots also provide a learning opportunity to address challenges before scaling up.

8. **Integrating Insurance with Broader Disaster Risk Management (DRM) Strategies:** AIDMI recognized that insurance should not be a standalone solution but an integrated part of disaster risk management strategies. This meant combining insurance with other risk reduction efforts, such as early warning systems, preparedness training, and building community resilience. The goal was to create a holistic approach that reduces the overall risk while providing a financial safety net through insurance.

- **Key Lesson:** Insurance is part of a broader risk management strategy: Insurance alone is not enough to build resilience. It should be part of an integrated disaster risk management approach that includes prevention, mitigation, and preparedness.

### Conclusion

AIDMI's journey with risk transfer through insurance has demonstrated that while there are significant challenges, especially in terms of affordability, accessibility, and trust, insurance can play a crucial role in disaster risk management. The key lessons learned – especially the need for customized, community-centered solutions, the importance of collaboration, and the role of education and transparency – offer valuable insights for any organization or government aiming to use insurance as a tool for disaster risk reduction and resilience building. ■



# Heat Adaptation Finance for Women – Applying Insurance to Solve a Disproportionate Burden

By Kathy Baughman McLeod, Mary McBryde and Visala Annamalai, *Climate Resilience for All, Washington DC & Cape Town*

Climate-induced disasters – such as extreme heat, flooding, wildfires, and drought – are causing substantial societal, public health, and economic losses globally. These climate shocks are growing in intensity, duration, and destruction – and few are prepared to face them. Women and vulnerable communities are disproportionately affected and at greater risk due to intersecting factors such as homecare responsibilities, poverty, challenging working conditions, and limited access to water and toilets. These conditions exacerbate health risks, result in significant income loss, and reduce the capacity of these communities to prepare for, endure, and recover from such climate-related events.

Using insurance approaches can help manage and reduce these impacts. With \$32 trillion in assets under management and the world's best experts in risk quantification and transfer, the insurance industry is a critical market actor in addressing climate risks and reducing impacts. Further, there is evidence of a correlation between the rate of insurance penetration (particularly property and casualty) and GDP growth, suggesting that wider takeup of insurance often aligns with higher GDP per capita.<sup>1</sup> Insurance



SEWA Farmers from Anand in Gujarat. Photo credit: Geraldine Henrich-Koenis

has long been shown to reduce societal risks, build stronger and safer cities, and protect people and property. It is now time to show its utility in supporting financial and physical risk reduction from climate shocks for vulnerable people and communities.

## Extreme Heat, Women, and Insurance

Of all climate perils, extreme heat is the most lethal, silently causing more deaths than any other hazard. Recent and mounting evidence shows that women experience far greater physical and economic harm due to

extreme heat. Women are more susceptible to heat-related illnesses due to physiological differences, which include higher core body temperature hormonal fluctuations, body fat percentage, and heart rate than men. Studies have shown that women are up to 14 times more likely to die in climate-related disasters than men<sup>2</sup> and are nearly four times more likely to be heat intolerant.<sup>3</sup> Additionally, extreme heat poses significant risks to maternal health with each 1°C rise in heat exposure among pregnant women linked to a 27-42% increase in the risk of miscarriage or stillbirth.<sup>4</sup> Extreme

<sup>1</sup> Swiss Re sigma No 4 /2021 <https://www.swissre.com/dam/jcr:19f316fe-0381-42a9-8cfd-9794f746e421/swiss-re-institute-sigma-4-2021-en.pdf>

<sup>2</sup> OECD temporary archive. (2023). <https://web-archiver.oecd.org/temp/2023-07-18/662394-gender-discrimination-inhibits-global-efforts-tackle-climate-crisis-sigi.htm>

<sup>3</sup> Kazman, J. B., Purvis, D. L., Heled, Y., Lisman, P., Atias, D., Van Arsdale, S., & Deuster, P. A. (2015). Women and exertional heat illness: identification of gender specific risk factors. *U.S. Army Medical Department Journal*, 58–66.

<sup>4</sup> Asamoah B, Kjellstrom T, Östergren PO. Is ambient heat exposure levels associated with miscarriage or stillbirths in hot regions? A cross-sectional study using survey data from the Ghana Maternal Health Survey 2007. *Int J Biometeorol*. 2018; 62(3): 319-330. DOI:

## Case Study: WCSI in India

In 2023, CRA launched the Women's Climate Shock Insurance and Livelihood Initiative (WCSI), a global initiative that combines financial and non-financial interventions, as well as early warning systems, to protect the health and livelihoods of women from the mounting impacts of extreme heat.

In 2024, the WCSI launched in India. CRA, in collaboration with SEWA and Swiss Re, co-developed and tested a new, two-pronged financial approach, combining a heat parametric insurance product with direct cash assistance to enhance financial protection for SEWA members when extreme heat threatened their health and income. Indian insurance company, ICICI Lombard played the role of the primary insurer. This dual strategy provided members with layered financial protection at different temperature thresholds, offering more comprehensive coverage and better support in coping with the growing impacts of extreme heat. Further, 11,000 women renewed or activated a new bank account in their name as part of taking a policy.

The programme covered 50,000 SEWA members across three states – Gujarat, Maharashtra and Rajasthan – and 22 districts and included workers in eight heat-exposed trades such as head loaders, farmers, home-based workers, salt pan workers, waste recyclers, shipyard workers, construction workers, and market vendors. The programme will be expanded in 2025. After temperatures soared across India in May, all 50,000 SEWA members who purchased small insurance policies and enrolled in the programme for the 2024 heat season received payouts, which totalled \$590,000 – an average of ₹1,030 per woman. The insurance and cash assistance policies paid out each time a temperature threshold was exceeded, and many programme participants – who paid between \$2.50 and \$3 to join for the year – received multiple payments throughout the heat season.

One beneficiary of the WCSI was 55-year-old Gitaben Rawal, who has spent 40 years as a head loader, transporting heavy loads of fabric, primarily on her head, across one of the largest markets in Ahmedabad. Extreme heat has significantly increased the financial and health risks associated with her job. Rising temperatures cause more street vendors and customers to stay at home, resulting in a decrease in her daily income from ₹300 to ₹500 (\$3.59 to \$4.79) on a good day to ₹60 or ₹70 (72 cents to 84 cents) on a particularly hot one. In May, as temperatures approached 45 degrees Celsius (113 degrees Fahrenheit), Rawal collapsed from the heat while carrying a load of fabric. The fall resulted in a head injury, a broken leg, and damage to the expensive cloth. The bills accumulated, including hospital expenses, alongside payments to the fabric vendor for the value of the damaged cloth. Unable to work for 15 days, the widow turned to loan providers and her four grown children to manage her financial needs. For Rawal, and many other participants, the payouts from the WCS heat insurance and income support programme provided essential financial relief at critical times. Rawal utilised her payout to cover her medical expenses and repay some of the loans she had taken out following her accident, and buy food, supporting essential needs and leaving her in a stronger financial situation.

Heat reduces the capacity of women working in the informal economy to earn the daily wages they depend on for survival. Women are more likely to be employed in informal jobs, often outdoors or in poorly ventilated structures, making them highly vulnerable to heat at work. Women-headed households in rural

areas experience significant income losses due to extreme heat and flooding. A 1°C increase in temperature can lead to a 34% reduction in the total income of female-headed households compared to male-headed households. Additionally, heat stress widens the income gap between

female-headed and male-headed households by \$37 billion annually, while floods contribute an additional \$16 billion.<sup>5</sup> Climate adaptation interventions are increasingly needed as temperatures rise, extreme heat conditions proliferate and losses grow.

10.1007/s00484-017-1402-5 as cited in Baharav, Y., Nichols, L., Wahal, A., Gow, O., Shickman, K., Edwards, M., & Huffling, K. (2023). The Impact of Extreme Heat Exposure on Pregnant People and Neonates: A State of the Science Review. *Journal of Midwifery & Women's Health*, 68(3).

<sup>5</sup> FAO. 2024. [The unjust climate – Measuring the impacts of climate change on rural poor, women and youth.](https://www.fao.org/3/cc9680en/cc9680en.pdf) <https://www.fao.org/3/cc9680en/cc9680en.pdf>



Insurance can be effective for addressing climate risks and impacts. When combined with other financial and non-financial interventions, insurance can be particularly effective in supporting and empowering women and vulnerable communities, including by better integrating poor and informal workers into the formal economy, enhancing their risk and financial literacy, and increasing their resilience to climate threats. “Parametric” insurance – a relatively new type of risk-transfer product – is gaining traction, and drawing attention from key actors such as the Insurance Development Forum, the G20-created Global Shield, the InsuResilience programme, national governments, and the U.N Development Programme’s Insurance and Risk Finance Facility. Unlike traditional indemnity insurance, parametric insurance is triggered by pre-determined thresholds and doesn’t rely on post-event analysis of losses. Payouts can be delivered within days or weeks of a climate event directly to the beneficiaries, which can be critical to quicker and more effective recovery, especially for those with the fewest resources to fund recovery themselves. Parametric products are increasingly used by countries and sub-national jurisdictions, along with regional risk pools serving the disaster finance needs of particularly climate-vulnerable areas. Several trials of parametric heat insurance have been deployed, to protect health, livestock, income, and livelihoods, and experiences with these products hold valuable lessons for the future.

#### Key Learnings

This CRA initiative, begun in India and Pakistan, is now expanding to

Thailand and West Africa. Through different WCSI programmes, key learnings are emerging:

1. **People don’t understand the seriousness of rising heat threats, and the disproportionate impact it has on women.** Awareness of the size and scale of the dangers of extreme heat remains too low among communities, governments, and many other parts of society to prompt appropriate responses. That means awareness must be raised even as interventions are created and delivered simultaneously.
2. **Insurance alone is not enough.** It can increase the financial protection of highly vulnerable populations, including informal workers. But it needs to be delivered with other financial solutions, such as direct cash assistance, as well as non-financial solutions, which can include, for example, protective equipment to help workers adapt to hotter working conditions. With this mix of interventions, the potential to build resilience is greatly enhanced.
3. **Building insurance literacy is key.** Understanding by the buyer/beneficiary that insurance is not designed to provide payouts to cover all losses, only a pre-determined sum when key triggers are passed, is essential to avoid unrealistic expectations. Providers must be clear and transparent on this issue.
4. **Managing basis risk is crucial to ensure the effectiveness and fairness of parametric**

**insurance schemes.** Basis risk in parametric insurance refers to the mismatch between the actual losses experienced, and the insurance payout triggered by a specific parameter, such as rainfall, wind speed or temperature. This occurs when the parameter used to activate the payout does not perfectly correlate with the actual damage or loss, leading to either insufficient payouts for significant losses or payouts when little or no damage occurs.

5. **Parametric insurance can help keep poor people out of debt.** These products offer an alternative source of financial protection for vulnerable people who otherwise often resort to predatory lending, which can bring long-term negative financial and social consequences, crippling their ability to prepare for and recover from future climate and other shocks.
6. **Forecast-based insurance is the future.** Parametric products that pay out at the time of a verified forecast of a predicted severe event versus after the actual event are a proactive disaster risk management approach. They enable early action to avoid losses, allowing policy buyers to rapidly take the actions they think will most protect themselves from impacts such as heat extremes, drought or storms, and reducing the costs and uncertainty of post-disaster response. Efforts are underway to scale the approach and enhance the regulatory environment to accelerate these products. ■

# UNDP's Insurance and Risk Finance Facility (IRFF): Parametric Insurance Solutions

By Mr. Sumanta Kumar Sahoo, National Programme Coordinator, UNDP India

## Overview

The UNDP's Insurance and Risk Finance Facility (IRFF) is dedicated to creating innovative insurance solutions that enhance resilience against socio-economic, climate, health, and disaster risks. A key initiative is the development of parametric insurance products that offer quick payouts based on predefined triggers (e.g., specific weather conditions), ensuring faster financial relief compared to traditional insurance models, which require verification of actual losses.

## Parametric Insurance Product Development

### Pacific Islands

In collaboration with private sector partners, regulators, and agricultural agencies, UNDP has introduced parametric micro and meso insurance products across countries such as Fiji, Tonga, Samoa, Vanuatu, and Papua New Guinea. These products cover risks associated with high windspeed, excessive rainfall, droughts, and earthquakes, benefiting farmers, fishers, and small businesses by providing faster financial protection in times of crisis.

### Southeast Asia

Partnering with global insurance companies, UNDP is developing digitally enabled parametric insurance solutions aimed at protecting vulnerable families and small businesses. These initiatives are focused on cost-effective, large-

scale risk finance solutions, addressing climate and disaster risks in countries across Southeast Asia.

## Case Study: Parametric Insurance in the Pacific Islands

### Previous Challenges

- Delayed Payouts:** Traditional insurance models often resulted in payouts that took months or years, severely hindering communities' ability to recover quickly from natural disasters.
- High Costs:** Insurance premiums were often too high for smallholder farmers, fishers, and small businesses, leaving many without coverage.
- Complex Claims Process:** Traditional claims involved lengthy procedures, requiring substantial proof of loss, which added stress to already affected communities.
- Limited Coverage:** Conventional insurance products were not tailored to the specific needs of vulnerable communities, often excluding critical risks like cyclones and floods.

### Current Benefits

- Immediate Financial Relief:** Parametric insurance triggers payouts based on predefined weather conditions (e.g., windspeed, rainfall) within days, enabling communities to recover swiftly.
- Affordability:** Lower premiums make parametric insurance

accessible to a wider population, including smallholder farmers and fishers.

- Simplified Claims Process:** Payouts are automatically triggered by objective data, eliminating the need for complex claims processes.
- Tailored Coverage:** Insurance products are designed to cover the specific risks most relevant to communities, including cyclones, floods, and droughts.

## Example: Fiji's Experience with Parametric Insurance

In Fiji, parametric insurance has proven to be a game-changer for farmers. Before its introduction, farmers struggled for months after cyclones without financial support, leading to prolonged recovery times and increased debt. With parametric insurance, payouts are made within two to three weeks after a cyclone, based on windspeed data. This quick relief allows farmers to purchase seeds, repair infrastructure, and resume their operations, significantly reducing the economic fallout of natural disasters.

**Impact:** The shift to parametric insurance in the Pacific Islands has created a more reliable safety net, enhancing resilience and empowering vulnerable communities to recover from disasters more quickly and sustainably. ■

## Parametric Insurance and Extreme Heat: SEWA's Experience

By Dr. Sahil Hebbar, SEWA, India

The increasing frequency and intensity of climate shocks are having a devastating and disproportionate impact on poor informal sector women workers, 2.9 million of whom are members of Self Employed Women's Association (SEWA). Members' livelihoods and incomes decrease by 30-50% due to decreased work efficiency, reduced work hours, increased raw material expenses, spoilage of goods, loss of customers, and reduced work days due to heat-related illnesses. SEWA's climate insurance programme, started in 2023, aims to build the resilience of informal sector women workers against climate shocks.

The heat insurance product was piloted in 2023 and covered 21,000 SEWA members across 5 districts in Gujarat. In addition to the insurance product, each of the 21,000 members was provided with climate adaptation equipment like solar light, tarpaulin sheet, overhead umbrella, or insulated water jug. It was a parametric insurance product with the sole parameter being daily maximum temperatures. In 2024, the programme was scaled up to 50,000 members across 22 districts across Gujarat, Rajasthan, and Maharashtra. Instead of the climate adaptation equipment, SEWA introduced a cash assistance layer that triggered at lower temperatures (i.e. at 40°C) than the insurance product.



The product did not trigger in 2023. However, in 2024, the cash assistance layer triggered in all 22 districts and members received the assistance of INR 400. In addition, the insurance layer triggered in 17 out of the 22 districts, and 46,339 members received payouts ranging from INR 151 to INR 1651. An added benefit from the programme was financial inclusion for 17,000 members without bank accounts or with dormant accounts, who SEWA linked to the formal financial system by opening/activating accounts.

SEWA's parametric insurance pilot highlighted several lessons. First, there is a need to incentivise low-income communities in the form of premium subsidisation, cash assistance, or climate adaptation equipment until they fully

understand the value of insurance. Second, given the limited knowledge about insurance, especially parametric climate insurance, there is a need for institutional and individual capacity building. CSOs, CBOs, and NGOs can play a vital role in this regard. Third, the parametric insurance product should bundle coverage for multiple climate shocks like excessive rainfall and cyclones, in addition to heatwaves. Fourth, the parametric product should incorporate multiple parameters like humidity and night-time temperatures. Fifth, integrating insurance with contingency loans post-climate shocks, index loans, commitment savings, and micro-pension schemes will support both immediate recovery and long-term resilience building. Sixth, insuring SMEs and SHGs as group policyholders will help scale the product quickly and in an affordable manner, thus ensuring comprehensive protection against climate shocks. ■

*Elaben Bhatt always said that, "social security is both a concept as well as a system. It envisages that the members of a community shall be protected by collective action against social risks – many of the risks are beyond their control and for which they have no wherewithal or countervailing power."*



# InRisk Labs: Pioneering Parametric Insurance for Extreme Heat in India

By Malay Kumar Poddar, MD, InRisk Labs, India

The impacts of climate change are increasingly severe in India, with extreme temperatures, more frequent heatwaves, and unpredictable rainfall patterns stressing both communities and industries. Traditional insurance models are often slow to adapt to these rapid changes, but parametric insurance offers a faster, more efficient solution. By using predefined triggers—such as temperature, rainfall, or wind speed—parametric insurance ensures quicker payouts, providing essential financial relief to those affected by climate risks. As India continues to face the escalating consequences of climate change, parametric insurance is proving to be an effective tool for protecting vulnerable sectors like agriculture,

disaster management, energy, and supply chain & logistics.

**InRisk Labs** has been at the forefront of designing and implementing parametric insurance solutions tailored to India's climate challenges. Focusing on index insurance for climate risks, our products offer comprehensive protection against unpredictable weather patterns. With real-time loss monitoring and data-driven frameworks, we improve risk management and expedite claims processes, helping insurers and reinsurers respond swiftly during crises.

## The Heat Index: Capturing Extreme Heat Risk

One of the most pressing climate risks in India is extreme heat. The

insurance industry has responded with innovative parametric products launched in recent years addressing risks like reduced crop yields, reduced dairy productivity, poultry mortality, and loss of livelihood. However, effective parametric insurance must go beyond simple temperature triggers. The **heat index**, which combines temperature and humidity, offers a more accurate measure of how heat is experienced, especially in densely populated urban areas and agricultural regions where workers face the brunt of extreme heat. In northern India, **loo winds**—hot, dry winds—add another layer of complexity. These winds raise temperatures and strain economic activities.

## Mitigating Basis Risk with Reliable Data

Another critical challenge in parametric insurance is **basis risk**—when insurance payouts don't match actual losses, which usually happens due to inconsistencies in measuring weather data. We reduce basis risk by relying on robust data from sources like the Indian Meteorological Department (IMD), the European Centre for Medium-Range Weather Forecasts (ECMWF), and NASA. These high-resolution datasets ensure our parametric triggers reflect actual conditions, minimising discrepancies and enhancing product credibility.

## Custom Product Designs for Diverse Needs

Finally, parametric insurance solutions need to meet the unique needs of different sectors to accurately reflect the real-world



losses. For **urban areas**, where the **urban heat island effect** raises temperatures, our products use lower heat index thresholds to ensure timely relief. In **agriculture**, where extreme heat devastates crops and livestock, we design products that trigger payouts after consecutive days of extreme heat, providing farmers with immediate financial assistance to mitigate losses. For **occupational risks**—such as outdoor workers in construction and agriculture—we design products

that factor in the **ability of human body to cool itself**, ensuring payouts reflect real working conditions and protect worker safety.

The recently launched **Shrimp Parametric Weather Insurance Cover** provides coverage to Shrimp farmers against extreme temperatures and temperature fluctuations that can cause health stress to Shrimp crops leading to reduced growth, higher susceptibility to diseases, and even mass mortality.

### Building a Resilient Future

As climate change accelerates, the need for fast, reliable insurance products grows. At InRisk Labs, we are committed to advancing parametric insurance by focusing on accurate data, reducing basis risk, and customising solutions to protect vulnerable communities and industries from the financial impact of climate risks. Our continued innovation aims to create a more resilient future for those most affected by climate change. ■

## PARAMETRIC INSURANCE

# Key Points for Action to Make Parametric Insurance for Extreme Heat a Reality

By *Anshul Khurana, Cofounder, Entitled Solutions, India*

As the frequency and intensity of extreme heat events rise due to climate change, parametric insurance presents a promising solution to help mitigate the financial risks associated with such occurrences. Unlike traditional insurance, parametric insurance triggers payouts based on predefined events, such as crossing a specific temperature threshold. However, to make parametric insurance for extreme heat effective and accessible, key actions must be taken in areas ranging from data infrastructure to policy innovation.

Accurate real-time and historical data allow for objective triggers, ensuring that insurance payouts are made based on clearly defined parameters. However, significant investments in data infrastructure are needed to ensure that these policies can operate effectively. Public-private partnerships can be utilised to expand weather station networks and data-

gathering technologies like satellites and IoT devices. This ensures that temperature readings are granular and accurate. Global climate models often fail to capture the variability of temperatures at a local level. Tailoring heat indices to specific regions or urban heat islands will reduce basic risk—the gap between actual losses and the insurance payout—making the insurance more efficient.

Designing policies that reflect the nuances of local environments and heat levels is crucial. Governments, insurers, urban planners, and climate scientists must work together to design flexible policies that are tailored to the needs of different communities or sectors (e.g., agriculture, construction). A system of tiered payouts based on different levels of heat events (small, medium, and extreme) can ensure that policies address a range of scenarios, preventing both overly frequent and insufficient payouts. To incentivise risk reduction, insurance policies can offer benefits to communities that invest in heat-resistant infrastructure, thereby lowering the overall risk.

To ensure equity in protection, parametric insurance must be affordable and accessible to vulnerable groups. Governments can support low-income individuals by offering subsidies or incentives, ensuring they have access to insurance coverage. Microinsurance,

TABLE 1: WORKERS REPORTING SYMPTOMS OF WORKING IN EXTREME HEAT

Symptoms while working in extreme heat	Workers (%)
Heat exhaustion	51.81
Heat stroke	30.12
Dehydration	27.11
Sunburn and other skin issues	18.07
Kidney Disease	6.63
Heat Edema	7.23
Stomach or gastrointestinal issues	16.27

Source: Survey conducted by Telangana Gig and Platform Workers Union (TGPWU) & HeatWatch

## Heat and health

Exposure to high temperatures threatens people's lives, health, and wellbeing, leading to death and heat-related disease, and increasing healthcare demand during heatwave episodes. Older people, socio-economically deprived communities, very young children, pregnant women, and those with underlying health problems are particularly at risk.



From 2018 to 2022, the average summer temperatures that people were exposed to were 0.5°C higher than the 1986–2005 baseline average (indicator 1.1.1).



From 2013–2022, the total number of heatwave days experienced annually by children under the age of one was 43% greater than the equivalent demographic from 1986–2005. Adults over age 65 saw a 216% increase across the same timeframe (indicator 1.1.2).



From 2013–2022, each infant was exposed to an average of 7.7 life-threatening heatwave days per year, while adults over age 65 were exposed to 8.4 days per year (indicator 1.1.2).

### ECONOMIC IMPACT OF HEAT

Heat exposure limits labour productivity, which undermines livelihoods and the social determinants of health.

**191 billion** potential labour hours lost due to heat exposure in 2022, an increase of 54% from 1991–2000 (indicator 1.1.4).

**US\$219 billion** potential associated income loss in 2022, equivalent to 6.3% of GDP (indicator 4.1.3).



Agricultural workers were hit the hardest, seeing 64% of the potential hours lost and 55% of the potential income losses in 2022 (indicators 1.1.4 & 4.1.3).

### FUTURE PROJECTIONS

Unless urgent mitigation and adaptation action is taken, the health impacts of heat will increase drastically in coming years.

**2°C SCENARIO**  
In a scenario in which temperatures are kept to under 2°C of heating, heatwave exposure for people over age 65 is projected to be 5 times greater by mid-century (2041–2060 average) (indicator 1.1.2).

Source: India Lancet Countdown on Health and Climate Change Data Sheet 2023

with smaller coverage amounts and affordable premiums, can provide crucial financial protection to low-income households. Digital platforms and mobile applications can help streamline the registration and payout processes, particularly for those in remote or underserved areas.

In the urban context, a key cog to enable distribution could be industry bodies or platforms that deal with the vulnerable population such as gig and construction workers. Incorporation of parametric insurance components with other insurance or health programmes could enable widespread adoption in these segments.

Public-private partnerships (PPPs) can help de-risk the market and make these insurance products more viable. Governments can act as

reinsurers or provide financial guarantees, enabling private insurers to enter the market with less risk. Institutions like the World Bank can offer technical assistance, financing, and risk-sharing mechanisms to facilitate the expansion of parametric insurance, especially in developing countries. Collaboration with sector-specific experts (e.g., agriculture, construction) ensures that policies cater to the unique needs of each industry, improving their relevance and effectiveness.

A sustained effort to educate and build capacity across communities and sectors is critical for widespread adoption. Governments, insurers, and NGOs should work together to educate communities on the benefits and mechanics of parametric insurance, as well as how to access it. Capacity-building initiatives should

target local insurers, financial institutions, and community leaders, empowering them to design and implement policies that reflect the specific needs of their regions.

Parametric insurance should be part of a comprehensive climate adaptation strategy. It works best when integrated with efforts to build community resilience to extreme heat events. Encouraging investments in heat-resistant infrastructure – such as green spaces, cool roofs, and water management systems – can reduce the overall risk, making parametric insurance more effective. Parametric insurance can be tied to early warning systems for heat waves, offering real-time insights into when a payout might be triggered and allowing communities to take pre-emptive measures. ■



# Parametric Insurance - Building Financial Resilience for Rural India

By *Samdarshi Vikram Singh*, Vice President, Government Business Group, Future Generali India Insurance Company Ltd, India

An increase in heat stress will cause productivity losses in India equivalent to 34 million full-time jobs by 2030 (a loss of 5.8% total working hours): Swiss Re Institute, 2022.

The tailor-made structural offering under parametric insurance represents significant advantages with complete customisability pre-agreed payouts based on benchmarks/triggers to meet specific risk requirements of a customer and offer faster relief to customers without a lengthy manual survey process for loss assessment.

The offerings under parametric insurance cover can be extended to temperature, rainfall, wind speed, and humidity etc., it can cover any predefined parameter where a scientific correlation to a loss for an underlying asset can be built with a predefined benchmark/trigger like Cyclone, Earthquake, Floods etc.

Customers here are automatically compensated once a predefined benchmark/trigger is breached based upon the data provided by an agency (which is mutually agreed between the customer and insurance provider) and a predetermined payout is settled which was agreed at the time of product offering. The faster-paying mechanism enhances the financial resilience of the people insured.

Future Generali India Insurance company has recently offered parametric coverage for three of the rural assets under the Weather Index-based parametric insurance.



1. **Cattle (Ernakulam Milk Producers, MILMA)** - Heat above a particular temperature for different geographies can reduce milk production in Cows/Bufaloes by up to 30%. With increasing heat waves due to climate change, dairy owners experience losses due to lower milk yield and increased operational costs.
2. **Poultry (Srinivasa Farms)** - Heat above a particular temperature for different geographies can reduce the quantity/quality of eggs and meat yields.
3. **Shrimp (CIBA)** - Cold Wave and Temperature Swing covers are offered to cover shrimp health (Low temperature causes vulnerability to infection) and growth to achieve the required size and weight.

The primary customers for parametric insurance for dairy,

poultry and aquaculture to ensure financial stability can be:

1. **Small to Medium Dairy, Poultry and Fishery Farms:** These farmers are often the most vulnerable to extreme weather conditions and may have limited resources to manage sudden financial losses. Parametric insurance offers them an affordable and efficient safety net.
2. **Cooperatives and Unions:** In regions where small farmers are organised under cooperatives, these entities can purchase parametric insurance on behalf of their members to spread risk and protect the supply chain.
3. **Financial Institutions and Agribusinesses:** Banks and financial institutions that lend to the agricultural sector can use parametric insurance to protect their portfolios by encouraging or requiring farmers to adopt such coverage. ■

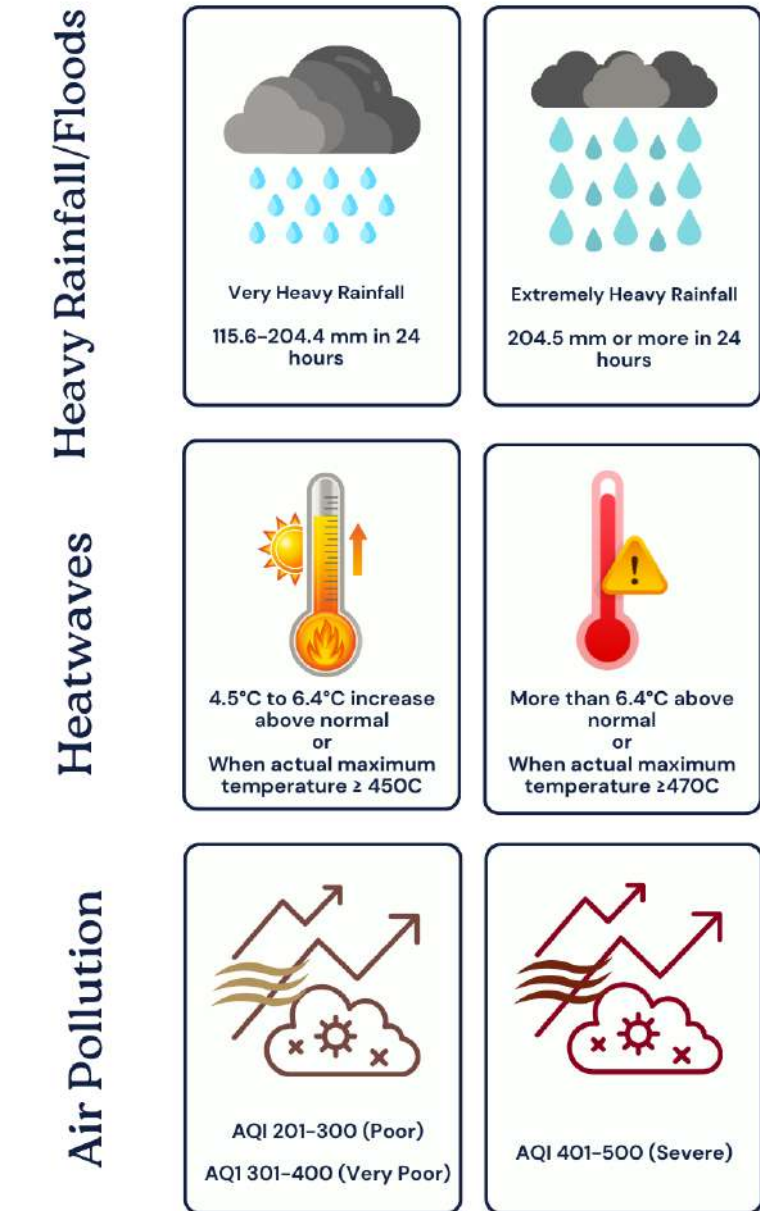
# The Health Impact of Climate Change on Gig Workers in Indian Cities: Exploring Parametric-plus Insurance as a Climate Adaptation Approach

By Suma Pathy, Population Services International (PSI), India

Urbanisation has led to an increase in on-demand services and is driving gig-work in India with 7.7 million people working in companies providing ridesharing, food delivery, e-commerce and home services. The quasi-formal nature of gig work, while providing flexibility, often increases workers' vulnerability. This includes long work hours, low and unpredictable wages, absence of legal contracts, inadequate social protection, and little to no access to health insurance or paid leave. Gig-workers are on the road 8-10 hours a day, often without breaks, exposing them to high ambient temperatures and pollution. Studies show that gig-workers in Indian cities experience significant heat stress and are exposed to particulate matter far exceeding WHO standards.

In 2022, Population Services International (PSI) under the USAID-funded urban health project, Samagra, partnered with Entitled Solutions to design an online health benefits platform for gig-workers while also accommodating employer requirements. As we worked closely with gig workers and their unions, it became evident that the growing impact of climate change, particularly heat stress, was severely affecting the health and livelihoods of these workers and their families.

In this context, PSI landscaped solutions available in the market



Source: IMD

that could address the dual challenges of adverse health and livelihood impacts caused by heat and other climatic stressors. Our expertise in the health insurance

space, and the specific needs and context of outdoor workers connected through a technology platform, PSI explored the possibility of applying insurance-

led financial solutions to improve vulnerable urban populations' resilience to climate change. This guided us to an innovative form of insurance – parametric insurance. Unlike traditional insurance, which assesses losses after they occur, parametric insurance operates on a predefined set of parameters measured by credible sources. When these specific conditions are met, such as extreme temperatures or heatwave days, the insurance triggers an automatic payout, providing immediate financial relief to those affected. PSI conducted a rapid landscape of other, albeit limited, experiences of parametric insurance in the context of the needs of impacted populations and the insurance sector, which has steered us in the direction of developing a modified product construct.

We recognise the limitations of applying a rigid set of predefined parameters. Designing a customised approach that ensures a broader range of individuals impacted by extreme weather conditions are covered, not just those who meet specific parameters. This adaptation allows the solution to better reflect the diverse realities faced by vulnerable populations during climate emergencies. Building on this, we are developing an integrated indemnity-parametric product. In this model, parametric insurance serves as a foundational layer activated by certain conditions (e.g., maximum temperature), followed by a secondary add-on layer of health insurance linked to climate-related impacts, such as dehydration during heatwaves. Our approach

combines both parametric and traditional coverage, ensuring more comprehensive protection for those affected by extreme weather events.

The pan-India, and in some cases, cross-country, reach of gig platforms, makes parametric insurance with our city-level customised solution, a feasible tool for addressing the health and livelihood impacts of climate change on this growing urban workforce. We are employing a participatory approach to designing this product(s) by closely working with both workers and platforms, and with other stakeholders including the government, municipalities, workplaces and insurance companies. ■

## Risk Transfer and Insurance: AIDMI Resources

1. Microinsurance: An Innovative Tool for Risk and Disaster Management ([read more](#))
2. GAR Input Paper on Risk Transfer through Microinsurance ([read more](#))
3. AIDMI's Risk Transfer and Insurance ([read more](#))
4. Making School Safer - AIDMI Initiatives ([read more](#))
5. Loss & Damage, and Anticipatory Action ([read more](#))
6. Building Resilience for Cotton Farmers in India: Evidence from Gujarat and Maharashtra ([read more](#))
7. Southasiadisasters.net ([read more](#))
  - a. Disaster Microinsurance: An Innovation for Transformation, Issue No. 133, July 2025 ([read more](#))
  - b. Risk Insurance and Adaptation: Managing Urban Risks, Issue No. 130, May 2015
  - c. Adaptation to Climate Change: Linking DRR with Micro insurance, Issue No. 106, March 2014
  - d. Micro insurance for Disaster Risk Reduction: Post Disaster Recovery of Poor, Issue No. 83, March 2012
  - e. The Potential of Index-based Insurance for Disaster Management in India, Issue No. 44, Feb. 2008
  - f. The Impact of Microinsurance in South Asia, Issue No. 43, January 2008
  - g. Community Risk Transfer Through Microinsurance: An Opportunity for South Asia, Issue No. 13, May 2006

For more information contact: [support@aidmi.org](mailto:support@aidmi.org)



# Leveraging Parametric Insurance for Addressing Extreme Heat Risk

By AIDMI Team, India



*A female small worker in Varanasi weaves bamboo baskets by the roadside, adapting her livelihood amid climate and financial vulnerabilities. Parametric insurance solutions can offer crucial support in mitigating such risks. Photo: AIDMI.*

As climate change intensifies, extreme heat events are becoming more frequent and severe, posing significant risks to human health, agriculture, and economic stability. Parametric insurance has emerged as an innovative financial solution to address these challenges, offering swift and efficient payouts based on predefined temperature thresholds rather than traditional loss assessments.

Parametric heat insurance operates on a simple premise: when temperatures exceed predetermined levels for a specified duration, automatic payouts are triggered. This approach eliminates the need for time-consuming damage assessments and reduces administrative costs, making it particularly attractive for addressing heat-related risks in vulnerable communities.

The effectiveness of parametric insurance in addressing heat risks lies in its ability to provide rapid liquidity when it's most needed. For instance, in urban areas, funds can be immediately deployed for emergency cooling centres, public health interventions, and support for vulnerable populations. In agricultural contexts, farmers can receive compensation quickly to implement adaptive measures or offset crop losses, maintaining financial stability despite extreme weather events.

Developing countries, which often bear the brunt of climate change impacts, stand to benefit significantly from parametric insurance schemes. These nations frequently lack the financial resources to respond effectively to extreme heat events, and traditional insurance products may be either

unavailable or prohibitively expensive. Parametric insurance offers a more accessible alternative, with clear triggers and rapid payouts enabling proactive risk management and enhanced resilience.

Recent implementations have demonstrated the potential of this approach. In India, parametric insurance programs have been piloted to protect communities against various climate risks, including extreme heat. These initiatives have shown promising results in providing timely financial support to affected populations and reducing the economic impact of climate-related events.

The gender dimension of parametric insurance is particularly significant given women's heightened vulnerability to extreme heat. Research has shown that women face disproportionate risks from rising

temperatures due to physiological factors, socioeconomic conditions, and traditional gender roles that often involve outdoor work during peak heat hours. Parametric insurance schemes can be specifically designed to address these gender-specific vulnerabilities by incorporating women's unique exposure patterns and needs into trigger mechanisms and payout structures. In Fiji, for example, parametric insurance programs have been tailored to protect women's livelihoods and enhance their adaptive capacity against climate risks.

However, challenges remain in scaling up parametric heat insurance. These include the need for reliable temperature data, appropriate trigger design, and sustainable pricing models. Collaboration between governments, insurers, and international organizations is crucial for overcoming these obstacles and developing effective solutions.

Looking ahead, the integration of advanced weather monitoring systems and climate modelling could further enhance the precision and effectiveness of parametric heat insurance. This, combined with increasing recognition of its value in climate adaptation strategies, suggests a growing role for parametric insurance in addressing extreme heat risks globally. ■

#### References:

1. Broberg, M. (2023). Parametric loss and damage insurance schemes as a means to enhance climate change resilience in developing countries. *Climate Policy*. <https://www.tandfonline.com/doi/full/10.1080/14693062.2019.1641461#abstract>
2. Kim, E. J. (2024). Heat and gender: Enhancing her resilience to rising temperatures. *Climate Risk Management Review*. <https://blogs.worldbank.org/en/dpovertyinsouthasia/heat-and-gender-enhancing-her-resilience-to-rising-temperatures>
3. Larsson, K. (2023). Parametric heat wave insurance: Innovative solutions

for climate resilience. *Journal of Climate Risk Management*. <https://www.sciencedirect.com/science/article/pii/S2405851323000351>

4. Sirur, S. (2024). India experiments with parametric insurance to mitigate costs of disasters. *The Economic Times*.
5. <https://india.mongabay.com/2024/06/india-experiments-with-parametric-insurance-to-mitigate-costs-of-disasters/>
6. Suzumu, M. (2024). From vulnerability to empowerment: The role of parametric insurance for women in Fiji. UNCDF Pacific Technical Report. <https://www.uncdf.org/article/8682/from-vulnerability-to-empowerment-the-role-of-parametric-insurance-for-women-in-fiji>
7. UNDP & Future Generali. (2023). Parametric insurance to build financial resilience: A comprehensive guide. United Nations Development Programme. [https://www.undp.org/sites/g/files/zskgke326/files/2024-10/undp\\_gcc\\_parametric\\_insurance\\_to\\_build\\_financial\\_resilience.pdf](https://www.undp.org/sites/g/files/zskgke326/files/2024-10/undp_gcc_parametric_insurance_to_build_financial_resilience.pdf)

#### KNOWLEDGE SHARING

### Locally Led Actions to Combat the Impacts of Heatwaves

*Mihir R. Bhatt and Vishal Pathak, Issue 86 (Article 9), March 18, 2025*

This edition of the Humanitarian Exchange, 'Climate change adaptations in humanitarian programming', aims to help answer this question, by providing some examples of the work that humanitarian organisations are doing in response to the threat of climate change. Co-editors Paul Knox Clarke (Principal at the ADAPT Initiative and an expert on humanitarian system reform) and Mihir R. Bhatt (Director of the All India Disaster Mitigation Institute, or AIDMI) present here a range of articles that encapsulate relevant interventions and learning. The choice of activities, organisations and locations is by no means representative, but the articles here do provide a broad overview of some of the ways that humanitarians are adapting their programming to take climate change considerations into account – and, taken together, they point to a number of emerging trends.

A distinct thread runs through the articles in this edition, of very strong community engagement, design and ownership of many of the climate-related programmes. The collection includes several examples of humanitarian agencies working to bring together local knowledge of environmental change and adaptation options with a more scientific understanding of climate change. A particularly interesting approach is that of the All India Disaster Mitigation Institute (AIDMI). Mihir R. Bhatt and Vishal Pathak explain AIDMI's appreciative enquiry method to help communities (in this case, groups of women farmers) identify and augment ways of making agriculture more resilient to climate change. The AIDMI article also highlights some of the organisation's work in urban areas to increase resilience to heatwaves – a reminder that climate change is as much an urban as a rural phenomenon. ■

Read full article: <https://odihpn.org/publication/locally-led-actions-to-combat-the-impacts-of-heatwaves/>

Read full publication: <https://odihpn.org/magazine/climate-change-adaptations-in-humanitarian-programming/>

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The views expressed in this publication are those of the author.

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