

Stories of Climate Resilience and Adaptation

# INSURE-ing Dignity

# Empowering Informal Workers through Parametric Insurance

Parametric Insurance as a tool for climate adaptation

The growing intensity of extreme weather events such as cold wave, heat wave, drought, and heavy precipitation pose significant risks for informal and migrant workers.

Informal workers, many of whom are seasonal migrants, often risk their health as they work through scorching heat, smog, heavy rainfall and extreme cold. Further, such weather events also adversely impact their livelihood translating to wage loss, food insecurity and even forced debt. Projections suggest that by 2030, heat alone could cut 2.2% of global working hours—equivalent to 80 million full-time jobs.<sup>1</sup>

"I kept a candle outside my house at 9 AM in the morning and by 11 AM, it had melted without even lighting it. That is how hot it is. And in this heat, we, construction workers are expected to work, as though it is normal".

-Santosh from Rajasthan, India

<sup>1</sup> - International Labor Organization. (2024). Ensuring safety and health at work in a changing climate [PDF]. Retrieved from https://www.ilo.org/sites/default/files/2024-07/ILO\_SafeDay24\_Report\_r11.pdf

# Parametric insurance offers a promising solution through fast, automated payouts triggered by measurable weather events

Jan Sahas, through its Migrants Resilience Collaborative (MRC) initiative, recognized the potential of such products, and piloted two parametric insurance products in India. These products cover construction workers against wage loss due to construction bans induced by poor air quality and extreme heat. The details of the two products as well as the stories of workers who received the insurance claim are mentioned later.

Jan Sahas further interacted with select stakeholders such as insurers, reinsurers, technical solution providers and funders to gather insights on leveraging parametric insurance for climate adaptation for informal workers.

A synthesis of these interactions aided by Jan Sahas and MRC's on-ground experience is presented below.

#### While automated payout triggers make the product attractive for the insured, the availability of trusted historical data on weather events is critical

The absence of claim-related hassles parametric insurance more appealing to vulnerable people who have limited exposure to insurance products. On the other hand, risk modelling based on trusted and reliable data sources helps build the confidence of the insurers to design such products. As of now, retail parametric insurance is relatively nascent globally with multiple ongoing pilots. The product has gained greater traction in the agriculture sector.

The reliance on the availability of accurate and sufficient historical data from a trusted source is the biggest challenge for insurers. Additionally, including multiple parameters to improve the efficiency and comprehensiveness of the risk model further complicates both the design and implementation of such solutions on the ground.

#### Customer trust and coverage of a critical mass of people are crucial for scale-up

The insurers often target a minimum volume of covers when developing new products, which is not always feasible for small-scale pilots. Consumers, particularly those from vulnerable groups, often have limited exposure to insurance. They neither know such products nor trust them. Such consumers also find it difficult to understand the claim triggers and are therefore reluctant to enroll for such solutions.



# Due to their nascency, retail parametric products are primarily funded by philanthropy

Most parametric solutions are funded through philanthropy, at least in part. The parametric products piloted by SEWA and Jan Sahas fall under this realm. A few others, like yield-based crop insurances are also run as government-subsidized schemes.

#### Given the importance of parametric insurance for climate resilience, the following approaches could help ensure the solution reaches the most vulnerable

Bundling opportunities. The bundling of insurance with other solutions such as cash transfer programs or early warning systems such as the prediction of floods and drought can be an effective way to increase their impact. Similarly, comprehensive insurance products that cover multiple climate events throughout the year would be more valuable for the insured.

Last-mile outreach. Trust-building through grassroots organizations would enable reaching consumers who may be willing to pay for the solution, at least in part. Further, fintech and micro-finance companies can also enable last-mile outreach with vulnerable groups.

Technology and AI. Interventions from solution providers have made data more accessible and usable and built a strong base for developing parametric solutions. Further, artificial intelligence offers the promise to better forecast multi-variable data that can support developing robust risk models.

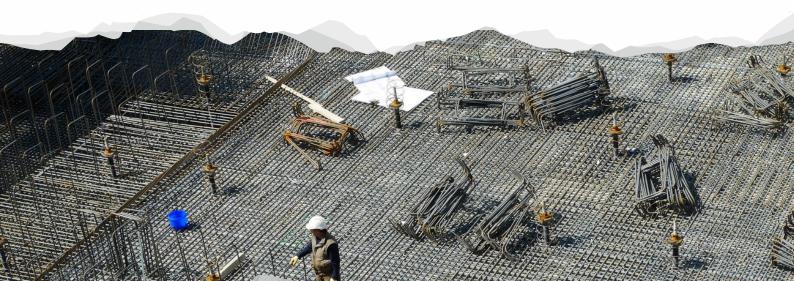
Utility for government. Parametric insurance can be used to insure against loss to public infrastructure in case of climate-induced disasters. Governments can cover vulnerable groups under parametric insurance whom they would otherwise compensate in case of a disaster.

Enabling regulations. The regulations in most South Asian countries such as India and Bangladesh are in favor of parametric solutions. In countries like Nepal where such solutions are in nascency, regulations are yet to be established reducing any regulatory roadblocks. At a global-level, the International Association of Insurance Supervisors (IAIS) has shared a blueprint for the regulation of such solutions with a focus on the protection of customers and policyholders.

Evidence generation and narrative building. Extreme weather events must be recognized as disasters affecting the national and global GDP. The impact of such extreme weather events must be brought to the forefront of global conversations. Proof of concepts can be developed with the support of research institutions to strengthen the trust and viability of the solution for large-scale impact. The value proposition of parametric insurance can be highlighted to global businesses for supporting parametric covers for informal workers.

### ACKNOWLEDGEMENT

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Overview of Parametric Insurance Products Piloted in India

### Jan Sahas Parametric Insurance Pilot 1: AQI-based parametric insurance in NCR for construction workers

Over the past decade, the Delhi-National Capital Region (NCR) has struggled with poor air quality during the winter months. While steps to control pollution have been somewhat effective, they come with significant collateral damage. One such measure is the frequent imposition of construction bans under the <u>Graded Response Action Plan (GRAP)</u>. Despite 2024 having the most 'better air quality' days since the COVID times, bans have been in effect for 34 out of the past 56 days, indicating their increasing frequency. For individuals reliant on a daily source of income these bans have resulted in a loss of nearly two-thirds of their expected income. These incidents make surviving in the metropolitan area an immense challenge.

To tackle wage losses caused by poor air quality, in partnership with <u>K. M. Dastur Reinsurance</u> <u>Brokers Private Limited (KMD)</u> and <u>Go Digit General Insurance Limited (GoDigit</u>), MRC developed a first-of-its-kind <u>Air Quality Index (AQI)</u> based parametric insurance cover for construction workers in Delhi-NCR. This provides workers with financial support to sustain themselves during repeated construction halts caused by high AQI levels. Key features include quick, hassle-free payouts of up to ₹6,000 per policy period.

# Jan Sahas Parametric Insurance Pilot 2: Heat stress parametric insurance in NCR & Lucknow

Heat stress is becoming a major occupational hazard for India's 100 million+ informal migrant workers, many of whom work outdoors in construction, logistics, and gig sectors. With temperatures frequently exceeding 42°C in several states, these workers face extreme risks of heat stroke, dehydration, and exhaustion. Migrant workers, often living in makeshift shelters with poor ventilation, suffer double impacts—lost income from missed work and rising medical costs. Women workers and daily-wage earners are particularly vulnerable, with little to no access to social protection or health insurance.

MRC in partnership with <u>K. M. Dastur Reinsurance Brokers Private Limited (KMD)</u> and <u>Go Digit</u> <u>General Insurance Limited (GoDigit)</u> developed a heat stress parametric insurance cover for informal workers in Delhi-NCR and Lucknow, in Uttar Pradesh. As a part of the cover, if the maximum temperature in the region breaches the threshold for five consecutive days the workers would receive a payout. The parametric insurance package also includes a hospital cash cover, providing workers cash assistance for each day of hospitalization. Key features include quick, hassle-free payouts of up to ₹3,000 for heat stress linked payout and up to ₹5,000 per policy period.

# Parametric Heat Stress Insurance

## **Case Studies**

### Case study – 1

**Amit Kumar**, 31, is a skilled heavy construction equipment operator who migrated from Uttar Pradesh's Baghpat district to Noida in search of better opportunities. He lives with his wife, a fellow construction worker, and their two young children—still awaiting school enrolment. Despite both parents working, their combined income barely covers essentials, with most of Amit's earnings spent on rent and food.

This year's blistering summer has taken a toll. Long days in the sun leave Amit severely dehydrated and fatigued. At home, the stifling heat inside their poorly ventilated rented room offers no relief, making restful sleep nearly impossible. Exhausted from sleepless nights, he begins each workday already drained. During peak heat, supervisors occasionally allow a short 15–20-minute break, during which workers crowd into shaded corners, sipping cold water for momentary comfort.

It was at the Pride Villa construction site that Amit connected with the **Migrants Resilience Collaborative (MRC)**, which registers informal workers for government social protection. The team helped Amit renew his *e-Shram* card, which provides basic life insurance, and supported his wife in getting hers for the first time. When MRC began registering workers for a **parametric heat stress insurance pilot**, Amit was quick to enrol.

In the second week of June, as temperatures soared past the insurance threshold, Amit became eligible for a  $\gtrless1,000$  payout. He plans to use it—along with a small loan—to purchase an air cooler. For Amit, it's not just about comfort; it's a step toward ensuring his family gets proper rest and he can face another punishing day under the scorching sun.

**Pushpa**, 43, and her husband Jagdish, 47, migrated from Uttar Pradesh's Bulandshahr district to Noida a year back in search of stable work. With all five of their children now married and living separately, the couple rely solely on their own labour for survival. They found work as daily-wage construction labourers at the Godrej Golflink site and have been working there ever since.

**Pushpa and Jagdish** spend long hours outdoors, exposed to the blistering summer heat. Despite being granted a brief midday rest, the extreme conditions often makes Pushpa ill—leading to medical expenses and days of missed work. Each missed day means lost wages, further straining the couple's already fragile finances.



During a routine visit to the construction site, the **Migrants Resilience Collaborative (MRC)** registered Pushpa and Jagdish for key welfare entitlements. They received *e-Shram* cards—government-issued identity documents for informal workers—and were linked to the **Ayushman Bharat** health insurance scheme. Given their vulnerability to heat-related illnesses, both of them also enrolled in MRC's **parametric heat stress insurance pilot**.

In mid-June, as temperatures soared past the insurance threshold, the couple received a ₹2,000 claim payout (₹1000 each). They plan to use the money for preventive measures—cooling aids, hydration, and basic medicines—to help her continue working through the summer without falling sick or losing income.

**Digpal**, 23, was a full-time farmer in rural India until mounting financial pressures pushed him to migrate to the National Capital Region with his brother 18 months ago. While his wife stayed behind to manage their family land, Digpal found work as a construction labourer at the **Godrej Golflink** site in Noida, and his brother secured employment in Gurugram.

The brutal summer heat has taken a toll on him. Despite covering his head and avoiding direct sunlight, the open-air construction site leaves him dehydrated, fatigued, and often too drained to eat. His poorly ventilated rented room offers no escape, forcing him to sleep outside to get even minimal rest. Repeated heat-related illnesses have caused him to miss work—adding medical costs to lost wages, worsening his financial strain.

Fortunately, his contractor provides some relief: shaded breaks, cold water, and frequent reminders to avoid direct sun exposure. Still, the conditions remain punishing.

At the site Digpal connected with the **Migrants Resilience Collaborative**, through which he got support to secure an *e-Shram* card and later get enrolled in the parametric **heat stress insurance cover.** 

When a severe heatwave struck in mid-June, Digpal qualified for a ₹1,000 payout. He plans to use it to buy a fan and an insulated water jug—seemingly small but vital tools to cool his body, preserve his health, and help him recover before facing another sun-scorched workday.



**Nikita**, 27, migrated from Sikandrabad, Uttar Pradesh, to Noida with her husband and two children. A homemaker until recently, she was thrust into the role of breadwinner when her husband fell seriously ill and could no longer support the family. Upon arriving in Noida, she found work as a construction labourer at the **Godrej Golflink** site, though her earnings barely cover the rent—leaving little for anything else.

Outdoor labour has exposed Nikita to harsh weather extremes. During winter, she worked through dense smog and poor air quality—until construction bans halted work and her income. Now, in the punishing summer heat, dehydration and exhaustion have become daily challenges. The fatigue follows her home, where she must continue household chores in an unventilated room. Poor sleep only deepens her exhaustion.



During a site visit, the **Migrants Resilience Collaborative** helped Nikita obtain both an *e-Shram* card and an **Ayushman Bharat medical insurance** card, ensuring access to essential protections. When MRC began enrolling workers for the **parametric heat stress insurance** pilot, Nikita was eager to join, given her vulnerable circumstances.

In mid-June, as the region experienced a severe heatwave, Nikita received a ₹1,000 payout through the insurance. She plans to use the money to buy a fan—or possibly a cooler—to improve ventilation at home, helping both her ailing husband cope with the daytime heat and allowing her to finally rest at night.

# Heat Stress : Hospital Cash Claims

### **Case Study**

### Case study – 1

Priyanka, a 26-year-old construction worker from Ghaziabad, lives with her father and two brothers. She and her elder brother, who works as an electrician, are the only earning members of the family. With an average daily income of around ₹500 and no guarantee of work—since they rely on the labor chowk for employment—the family lives day-to-day, depending entirely on whatever income comes in.

The Migrants Resilience Collaborative (MRC) met Priyanka at the Shyam Park labor chowk, where she regularly goes to find work as an unskilled labourer. MRC helped her register for a heat stress insurance package, which provides both coverage for extreme heat and a hospital cash benefit. After registering, the MRC team advised her to contact them in case of any hospitalisation due to heat-related or other issues.

On the evening of May 18, 2025, Priyanka went to Sanjivani Maternity and Nursing Home with severe stomach pain and a high fever. Since her family depends on her income, she had earlier tried to manage the symptoms with medicines and continued working. However, when the pain and fever didn't improve, she had no choice but to seek medical help. Initial tests showed she had low blood pressure, a stomach infection, and a high fever. Further diagnosis revealed that she had tuberculosis. After receiving treatment, she was discharged from the hospital on May 29. She is still on medication and unable to return to work. This has affected the family's finances significantly.



Not only have they lost one source of income, but they also have to manage the added burden of medical expenses. Her brother is now under increased pressure to handle all the daily household costs on his own.

The family contacted MRC with Priyanka's discharge summary and the required documents. MRC helped them submit a claim to the insurance company, which was successfully processed. The family received ₹5,000 from the insurer for the period she was hospitalized. This amount is helping them manage their daily expenses while one of their main earners is unable to work.

"While this amount does not cover for my medical expenses, it goes a long way in supporting the family's daily expenses which otherwise would have been difficult due to loss of wages during my hospitalization"

#### -Priyanka

This support has helped Priyanka and her family see the value of insurance more positively. While they are hopeful for similar support in the future, they are still hesitant to pay for insurance themselves due to their tight financial situation.

The family is continuing to face financial difficulties and is hoping for Priyanka's full recovery. The money received through the hospital cash claim has offered some temporary relief during this challenging time.



Mona (name changed for privacy), a 35-year-old construction worker, looks for daily work as an unskilled labourer at a labour chowk. She lives in Ghaziabad, part of the National Capital Region, with her husband and their two young children, aged three and one. Both Mona and her husband rely on the labor chowk each day to find work. Their combined income is low, and without a fixed employer, their jobs are unpredictable—making it difficult to meet even basic family needs.

The extreme summer heat in the region adds to their challenges by affecting their ability to work and reducing job availability. During outreach at the labor chowk, the Migrants Resilience Collaborative (MRC) connected with the couple, and Mona was enrolled in a heat stress insurance package. This package provides financial support during periods of extreme heat or in case of hospitalization.



Mona began experiencing itching and pain in her pelvic region, which made it difficult for her to sit, walk, or carry out daily activities. As her condition worsened, she visited Om Medical Center on June 4, 2025. After examination, she was diagnosed with herpes and was admitted for two days to begin treatment. She was discharged after 48 hours but remains on complete bed rest Although she is on the road to recovery, Mona is currently unable to help her husband—either financially or in caring for their children—because of her condition. The medical expenses, which came to around ₹15,000, placed a heavy strain on the family's already limited finances. The couple approached MRC with the required documents to file a claim under the heat stress insurance for the two days of hospitalisation. MRC helped them submit the claim, and ₹1,000 was settled by the insurer within 48 hours. The amount helped the couple cover three days of medication and offered a small but meaningful relief during a difficult time.

Through this experience, the couple has seen firsthand the value of having insurance. It has made them more open to the idea of enrolling in a plan. However, their difficult financial situation continues to prevent them from purchasing coverage on their own.

As they wait for life to return to normal, Mona and her family face each day with courage. Their daily income has been cut in half, while medical expenses have risen sharply. In these challenging times, the support received through the hospital cash insurance has provided some relief and helped ease a part of their financial burden.

# In the Headlines

#### THE TIMES OF INDIA

Heat insurance: Rs 3,000 for workers

### FORTUNE

Policy cover for daily labourers that kicks in at 42°C: What is heat insurance?

### ♦ APN NEWS

Digit Insurance Pays Claims Under Parametric Cover to Noida Migrant Labourers as Heatwave Breaches Threshold

#### moneycontrol

Go Digit launches India's first AQI-based parametric insurance for Delhi-NCR construction workers

### **Business Standard**

India's first AQI-based insurance for Delhi's construction workers is here

THE ECONOMIC TIMES

Digit Insurance partners with KMD to offer AQIbased Parametric Insurance to construction workers



### THE TIMES OF INDIA

#### Heat insurance: Rs 3,000 for workers

TNN / Updated: Jun 19, 2025, 07:49 IST

Digit Insurance has initiated payouts for migrant laborers in Noida due to extreme heat, utilizing a parametric insurance model that triggers payments when temperatures exceed specific thresholds for consecutive days.



MUMBAI: Intense heat has triggered a first-of-itskind insurance payouts, with Digit Insurance settling claims for migrant labourers in Noida after temperatures crossed 42 degrees Celsius. The payouts, based on weather thresholds rather than actual losses, aim to provide quick financial relief without lengthy claim assessments.

Digit Insurance, in partnership with K M Dastur Reinsurance Brokers and Jan Sahas Foundation, is

offering this heat-index based cover to workers across Delhi, Noida, Ghaziabad, Gurgaon, Faridabad, and Lucknow. "Digit's heatwave parametric insurance is a crucial step in providing migrant labourers with a much-needed safety net," said Adarsh Agarwal, chief actuary and product officer at Digit Insurance.

The policy pays up to Rs 3,000 when temperatures cross thresholds for five consecutive days, with an additional payout if the breach lasts 10 days. The threshold temperatures range from 42 to 43.7 degrees Celsius, varying by city. Many of the covered workers depend on daily wages and are exposed to heat-related risks such as heatstroke. In 2024, India recorded 67,637 suspected heatstroke cases and 374 deaths.

#### 42°C Threshold Triggers Claims In Noida

> The first-of-its-kind insurance payouts, **based on weather thresholds rather than actual losses**, aim to provide quick financial relief to migrant labourers without lengthy claim assessments

➤ The policy by Digit pays up to ₹3,000 when temperatures cross thresholds for five consecutive days, with an additional payout if the breach lasts 10 days The threshold temperatures range from 42°C to 43.7°C In May 2023, ICICI Lombard introduced a similar policy for 50k women labourers, which paid cash once temperatures exceeded limits, making it the first heat-related

livelihood loss cover in India

The cover also includes a hospitalisation cash allowance of up to Rs 5,000 for any accidental bodily injury or illness during the coverage period, regardless of temperature.

Jan Sahas Foundation is bearing the premium for the identified migrant workers. This is Digit Insurance's second collaboration with KMD and Jan Sahas. The three had earlier partnered to offer AQI-based parametric insurance to daily wage workers in Delhi-NCR.

In May 2023, ICICI Lombard, in collaboration with Swiss Re, introduced a similar policy for 50,000 women labourers associated with SEWA across 22 districts in Gujarat, Rajasthan, and Maharashtra. That policy paid automatic cash compensation once temperatures exceeded set limits, making it the first Indian initiative specifically addressing heat-related livelihood loss.

Jan Sahas supports the Migrants Resilience Collaborative (MRC), a grassroots-led multistakeholder collaborative of nonprofit, philanthropic, and private sector actors focused on ensuring safety, security, and mobility for vulnerable internal migrants.



In Partnership with Go Digit & K.M. Dastur