

Hyperlocal Climate Data Insights

AI first solution to drive Climate Resilience
for a Sustainable World



About Aurassure

Aurassure is a pioneering environmental monitoring and intelligence platform, providing real-time data and AI-powered analytics to help organizations proactively assess and manage environmental and health risks. Our integrated IoT-enabled devices, coupled with predictive insights, empower businesses and governments to make data-driven decisions that ensure compliance, safety, and sustainability.



Mission

“ To drive climate resilience and sustainability by providing accurate, real-time climate and environmental data combined with predictive insights that enable proactive decision-making and risk management.



300K+ Spatial Coverage
sq. km.



200M+ Population Covered



Why Climate Data Matters?



Threat to Human Health



Environmental Impact



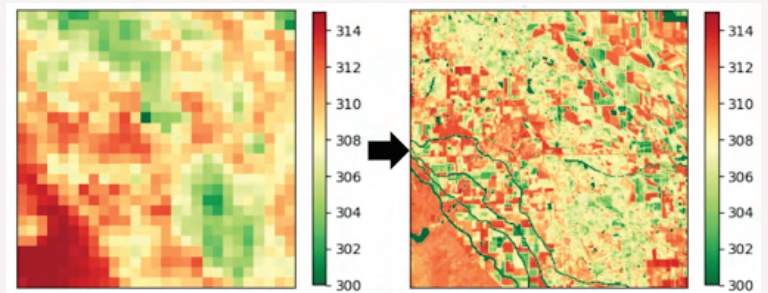
Extreme Weather



Risk to Lives

The Problem:

Lack of high resolution and accurate climate data.



Actual Sentinel 3 - Temperature

Required Resolution

Effective climate action requires precise, real-time insights, but most data comes from broad satellite estimates or scattered monitoring stations. The lack of hyperlocal, ground-level data creates gaps in risk assessment, and decision-making, leaving communities and industries vulnerable to climate threats.

The Solution:

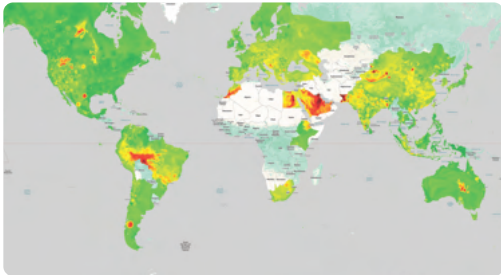
Hyperlocal, Real-Time Data with Actionable Insights

By capturing precise, on-the-ground climate data in real time, we bridge critical gaps in monitoring and decision-making. This enables accurate early warnings, effective risk management, and smarter climate resilience strategies.

What we offer?



IoT Enabled Sensor Devices



Proprietary Global Climate Data



Climate Intelligence AI Platform

Delivering hyperlocal and real-time insights for the following environmental challenges:



Air Quality

Pollution Hotspots



Flood

Water Inundation



Heat

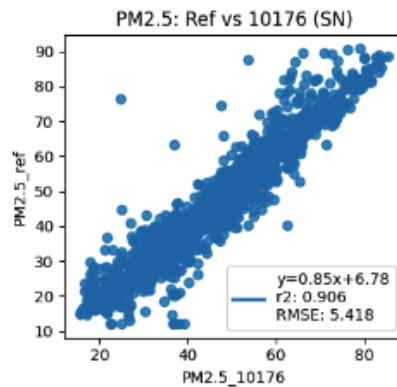
Heat Stress



Weather

Extreme Weather Events

Data Validation



Proven
Accuracy
more than
90%

Device Calibration

- In Lab Calibration
- NABL Reference Calibration
- Co-Location Validation Study
- On-site Calibration

AI/ML-based Calibration

- Sensor Fusion
- Adaptive Learning
- Contextual Calibration
- Temporal & Spatial Interpolation

Research Collaborations



■ ■ Our Smart Sensing Solutions



Infra

Outdoor Air Quality Monitor



Key Parameters

PM2.5, PM10, Temperature, Humidity, NO₂, O₃, CO, SO₂, NH₃, CO₂, CH₄ & more...



Connectivity & Power

4G, Wi-Fi, RS485, Ethernet, AC/DC, Solar, Battery backup



Trust

Outdoor Dust & AQ Monitor



Key Parameters

PM1, PM2.5, PM10, Temperature, Humidity, O₂, CO₂, CH₄ & more...



Connectivity & Power

4G, Wi-Fi, RS485, AC/DC, Battery backup



Care

Indoor Air Quality Monitor



Key Parameters

PM1, PM2.5, PM10, Temp, Humidity, TVOC, CO₂, SO₂, NO₂, O₃, HCHO, more...



Connectivity & Power

4G, Wi-Fi, RS485, DC, USB-C power, Battery backup



Aqua

Flood and Weather Monitoring



Key Parameters

Rainfall, Water level, Canal status, Pumping station performance



Connectivity & Power

4G, Wi-Fi, RS485, Ethernet, AC/DC, Solar, Battery backup



AWS

Automated Weather Station



Key Parameters

Temperature, Humidity, Rainfall, Pressure, Wind speed, Wind direction, UV, Ambient light, Noise



Connectivity & Power

4G, Wi-Fi, RS485, Ethernet, AC/DC, Solar, Battery backup



Customize

Build as per your requirement



Available Modules

Air Quality | Gaseous | Weather | Flood | Noise | Light



Flexible Configurations

Choose your sensors, connectivity, and power supply

■ ■ Aurassure Climate Intelligence Platform



Air

Flood

Weather

Heat



Parameters

PM1.0, PM2.5, PM10, PM100, TSP, SO2, NO2, CO, O3, NH3, CH4, VoCs, H2S, CO2

Water Inundation

Rainfall, Wind Speed & Direction, UV, Solar Radiation, Atmospheric Pressure

Ambient Temperature, Surface Temperature, Humidity



Real Time Data

1 sqkm | 85% Trends, Hotspots, Pollution Alerts

5 sqkm | 95% Microenvironment Mapping, Water Level Alerts

1 sqkm | 85% Microenvironment Mapping, Extreme Events Alerts

100 sqm | 95% Microenvironment Mapping, Heat Stress Alerts



Historical Data

10–20+ years of pollutant archives

Rainfall records (10–30 yrs), Flood extent maps, hydro-logical data

Archive – 30–50 yrs, Climate Normals – Observed Patterns

30–50 yrs of temperature/humidity, Heat wave event archives



Forecasting

1–3 days, AQI forecast

5 days flood risk forecast, Inundation Modeling

10 days, Spatial: 1 sq Km Temporal: Hourly

3–7 days heat / coldwave forecasts



Scenarios

Policy Impact Analysis

Land-use changes, Drainage infrastructure assessments

RCP pathways (2.6, 4.5, 6.0, 8.5), SSP scenarios, Seasonal shifts

Urban Heat Island modeling



Projection

10 yrs

5–10 yrs (near term) and 20–100 yrs (long term)

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5–10 yrs (near term) and 20–100 yrs (long term)



Risk

Health Risk, Mortality, Life Expectancy

Flood Risk, Asset Risk

Physical Risk, Asset Risk, Risk exposure to supply chains

Heat Risk, Asset Risk



Insights

Operational Optimization, Targeted Health Advisories

Environmental Livability Index, Early Warning System

Operational Efficiency, Resource Allocation, Energy demands

Public Health Interventions & Productivity Optimization

■ ■ Vertical Platform for Climate Sensitive Sectors



Construction

Track particulate matter for ensuring worker safety and fulfilling regulatory compliance.



Real Estate

Ensure a sustainable environment, boost property value, and comply with regulatory mandates.



Smart Cities

Sustainable city development with comprehensive air quality, weather, and flood management infrastructure.



Industries

Enhance emissions control, ensuring regulatory compliance, and safeguarding workplace health.



Enterprises

Enhance product offerings and integrate climate risk scenario planning.



Healthcare

Enable early disease detection and focused screening to enhance patient care and overall health outcomes.



Pharma

Drive targeted marketing, optimize product development, and ensure regulatory compliance.



Insurance

Enable parametric insurance products, strengthen risk assessment, and optimize policy pricing.



Logistics

Reduce service delay with route optimization and supply chain efficiency.

Building Resilient Cities with Our Flood Monitoring Solution

Urban flooding poses a significant risk to infrastructure, public safety, and economic growth. Our innovative flood monitoring system leverages real-time sensors and AI-driven analytics to deliver early warning alerts and flood forecasts, helping city authorities make timely decisions and minimize disaster impacts.

Key Features



Real-Time Data
(Water level &
Rainfall)



Early Warning
& Alerts



Forecasting &
Predictive
Scenarios

Case Studies

Kolkata

Project Partners: Asian Development Bank (ADB), Taru



Result: Reduced flooding in vulnerable wards by integrating real-time sensor data into city decision-making.

Chennai

Project Partners: GCMC (Greater Chennai Municipal Corporation), Acetech.



Outcome: Enhanced early flood warnings prevented major losses during seasonal monsoons.

Mumbai

Project Partners: IIT, Brihanmumbai Municipal Corporation (BMC)



Impact: AI-driven forecasting minimized traffic disruptions and improved citizen safety measures.

Driving Industrial Sustainability with Fence-Line Monitoring

Industrial facilities face strict regulations and rising stakeholder demands to reduce emissions, safeguard employees, and align with ESG commitments. Our Fence-Line Monitoring Solution leverages sensors and AI-powered analytics to provide continuous visibility into emissions, health risks, and operational performance—paving the way for cleaner, safer, and more profitable industrial operations.

Key Features



Real-Time Emissions Tracking



Operational Optimization



Employee Health & Safety



ESG Compliance & Reporting

Case Study : Jindal Steel & Power



Fence-Line Monitoring Deployment

Installed sensors along critical perimeter points, tracking emissions in real time.

Operational Improvements

Data-driven insights prompted automated adjustments in purification systems—lowering pollutant levels and reducing energy costs.

Employee Health & Safety

Early detection of emission spikes minimized exposure risks, improving workforce well-being and satisfaction.

ROI & Sustainability

Cleaner operations bolstered Jindal's ESG ratings, supported further facility expansions, and positioned the company as an industry leader in sustainable steel production.

Elevating Construction & Real Estate with Air Quality Intelligence

Rising health and safety standards, along with stringent environmental regulations, demand real-time air quality monitoring and proactive mitigation. Our Air Quality Monitoring Solution for construction and real estate provides live data, analytics, and alert systems that help manage site conditions, ensure compliance, and protect employee health.

Key Features



**Real-Time Air
Quality
Monitoring**



**Integrated
Purification Tech
& Alerts**



**Operational
Efficiency**

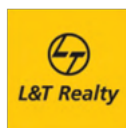


**Compliance &
Threshold Alarms**

Success Story: Emaar, Adani, Tata Realty, L&T Realty, Tarc, Signature Global



adani



Compliance Fulfillment

By using automated threshold notifications and historical trend analysis, these developers stay ahead of environmental regulations and minimize fines or project shutdowns.

Operational Efficiency

Real-time data on dust levels and site conditions led to better scheduling of high-dust activities, reducing worker fatigue and rework costs.

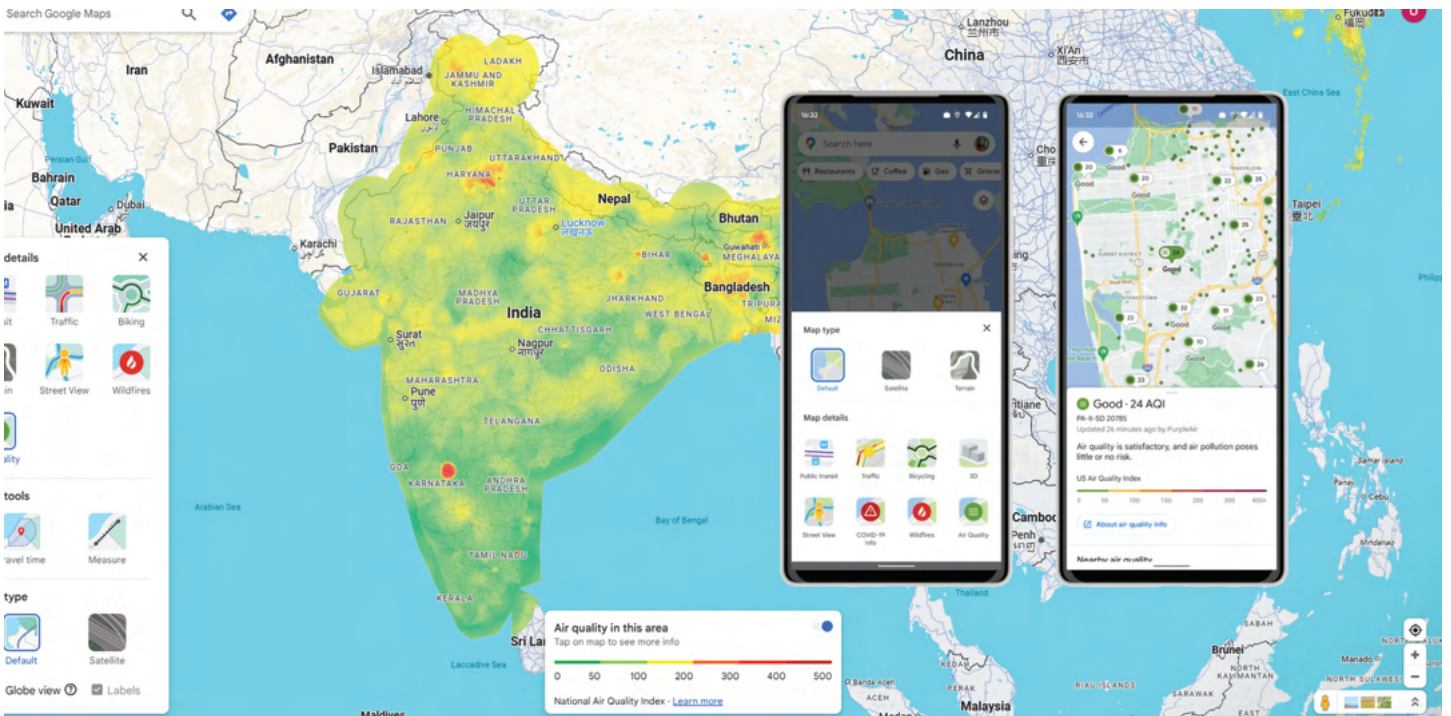
Employee Health & Safety

Quick detection of dangerous pollutant spikes and seamless integrations with purification systems protect laborers, visitors, and site engineers—leading to a healthier, more productive workforce.

Empowering Enterprises with Our Climate Data Solution



Case Study



Challenge:

Needed reliable, hyperlocal air quality data to enhance route optimization and health safety.

Aurassure's Solution:

Delivered highly accurate AQI data through seamless API integration.

Impact:

- Enabled Google to offer "Cleanest Route" options to millions of users.
- Boosted user engagement with actionable environmental insights.

Reinventing Insurance with Hyperlocal Climate & Health Intelligence

Insurance carriers face rising challenges from increasing climate events and heightened health risks. Our integrated data platform—combining real-time environmental sensors, parametric triggers, and advanced AI—enables smarter underwriting, faster payouts, and targeted health advisories to minimize claims and enhance customer satisfaction.

Key Features



Parametric Triggers



Advanced Underwriting Models



Targeted Health Advisories



Reduced Claims & Cost

Health Insurance Providers

Targeted Wellness Programs

Offer air-quality or temperature-based recommendations to policyholders, promoting healthier lifestyles and reducing claim incidents.

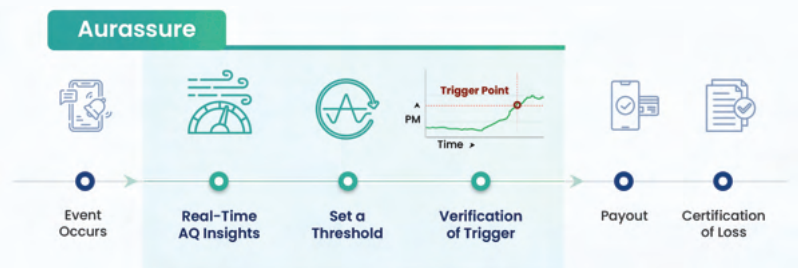
Early Intervention

Heat-wave and pollution alerts help members take precautions, cutting down on hospital admissions related to climate hazards.

Parametric Insurance Carriers

Real-Time Event Triggers

Set automatic payout conditions for floods, extreme heat, or rainfall thresholds simplifying claims and boosting customer trust.



Product Innovation

Launch niche parametric covers (crop insurance, travel disruptions, event cancellations) backed by credible, hyperlocal data.

Awards and Honours



Let's build a safer future together

Real-time environmental insights tailored to
protect what matters most.



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