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GLOBAL HEAT HEALTH  
INFORMATION NETWORK  
SOUTH ASIA



# Global Heat Health Information Network (GHGIN) South Asia Hub

Presentation at CSUF | 30 April, 2026



Regional partners:



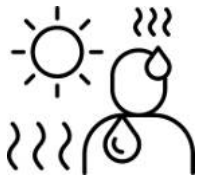
## Extreme heat is affecting people globally



Around **489,000** heat-related deaths occur globally every year (2000–2019 average).<sup>1</sup>



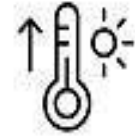
**45% of these deaths occur in Asia and 36% in Europe**, showing a large burden in densely populated regions.<sup>1</sup>



Heatwaves alone account for about **153,000 deaths** annually worldwide across **43 countries**.<sup>2</sup>



Between 2000 and 2016, the number of people exposed to heat waves increased by **125 million** globally.<sup>3</sup>



Nearly **4 billion people** (about half of the world's population) experienced at least one extra month of extreme heat due to climate change between 2024 and 2025.<sup>4</sup>



Heat-related mortality among people over 65 years increased by **~85%** between 2000–2004 and 2017–2021.<sup>1</sup>



Older adults, outdoor workers, people with chronic diseases, and urban populations are the **most vulnerable to extreme heat**.

## Extreme heat in South Asia and India



Around **750 million people** in South Asia are exposed to extreme heat each year.<sup>1</sup>



The region is considered one of the **global hotspots for lethal humid heat**, where high temperature combines with humidity to exceed human physiological limits.



India experienced more than **280 heatwave days** between 2010 and 2022 across different regions.<sup>2</sup>



India lost **~259 billion labour** hours due to heat exposure in 2023.<sup>3</sup>

Heat extremes will be more frequent, intense and longer under all climate change scenarios

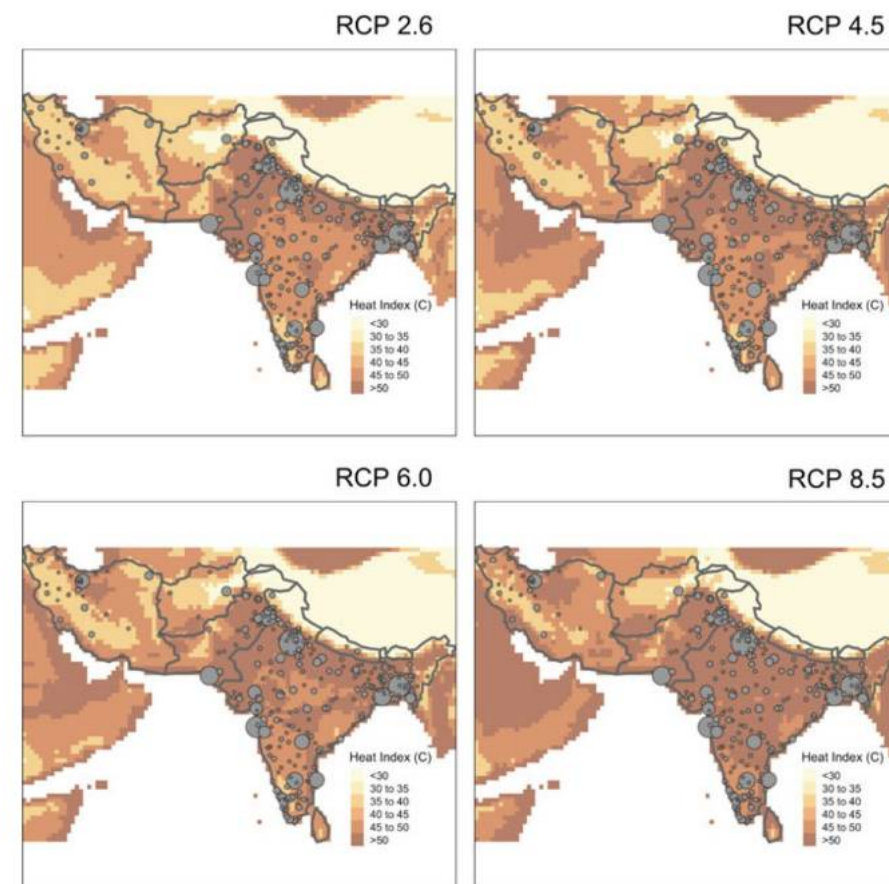


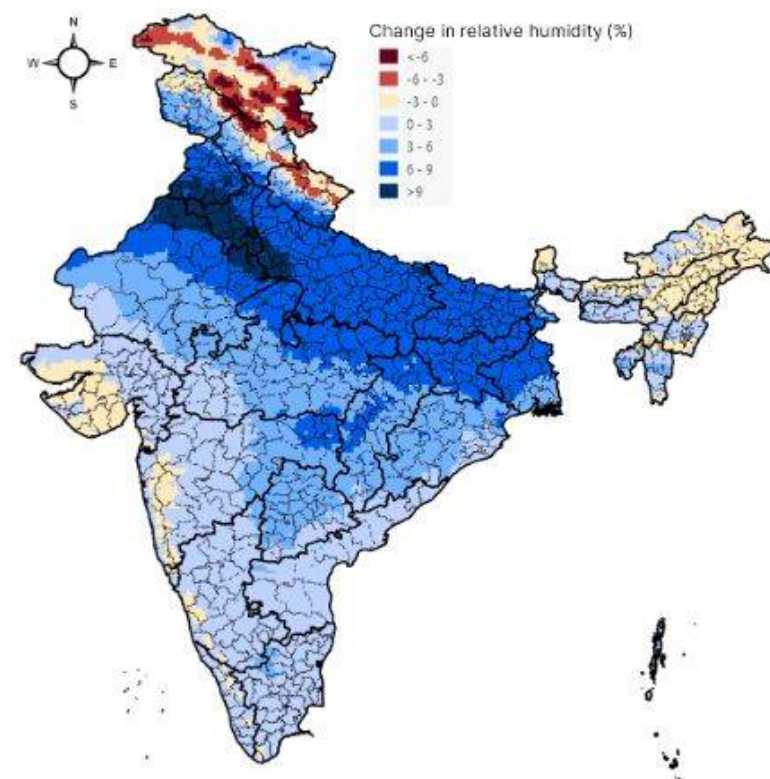
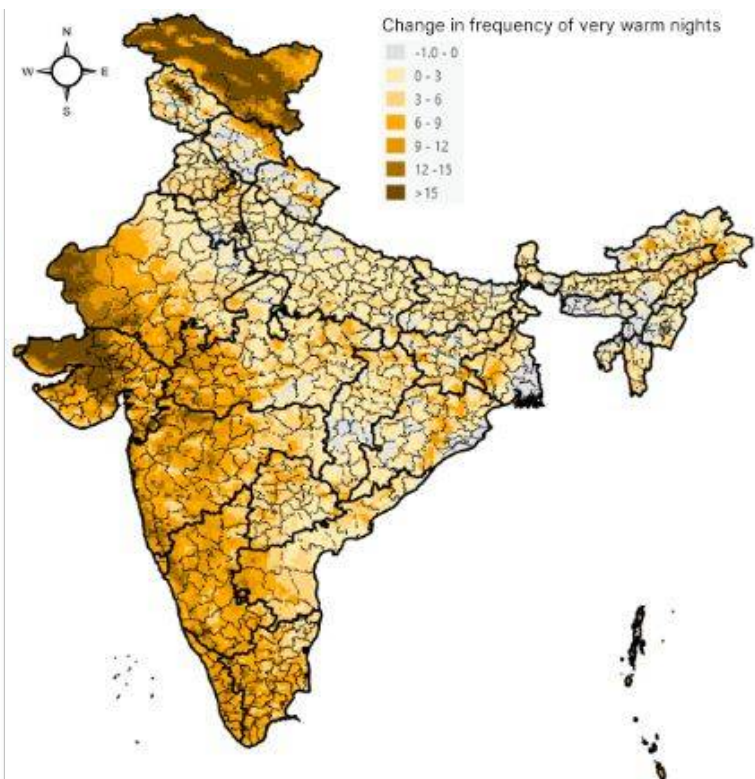
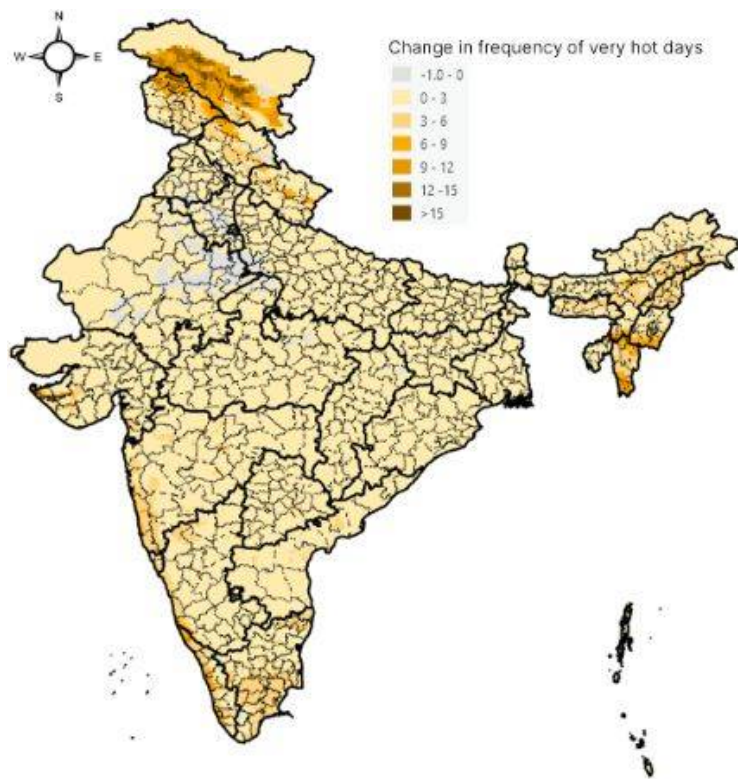
Fig: Projected 5 day extreme heat events intensities for South Asia for the period 2070-2099 by RCP. Data Sources: UN (2018) and the underlying data from ISIMIP - 6 (Warszawaki, et al. 2014\*)

\*Map taken from the study; admin boundaries not accurate

# The conundrum of extreme heat in India

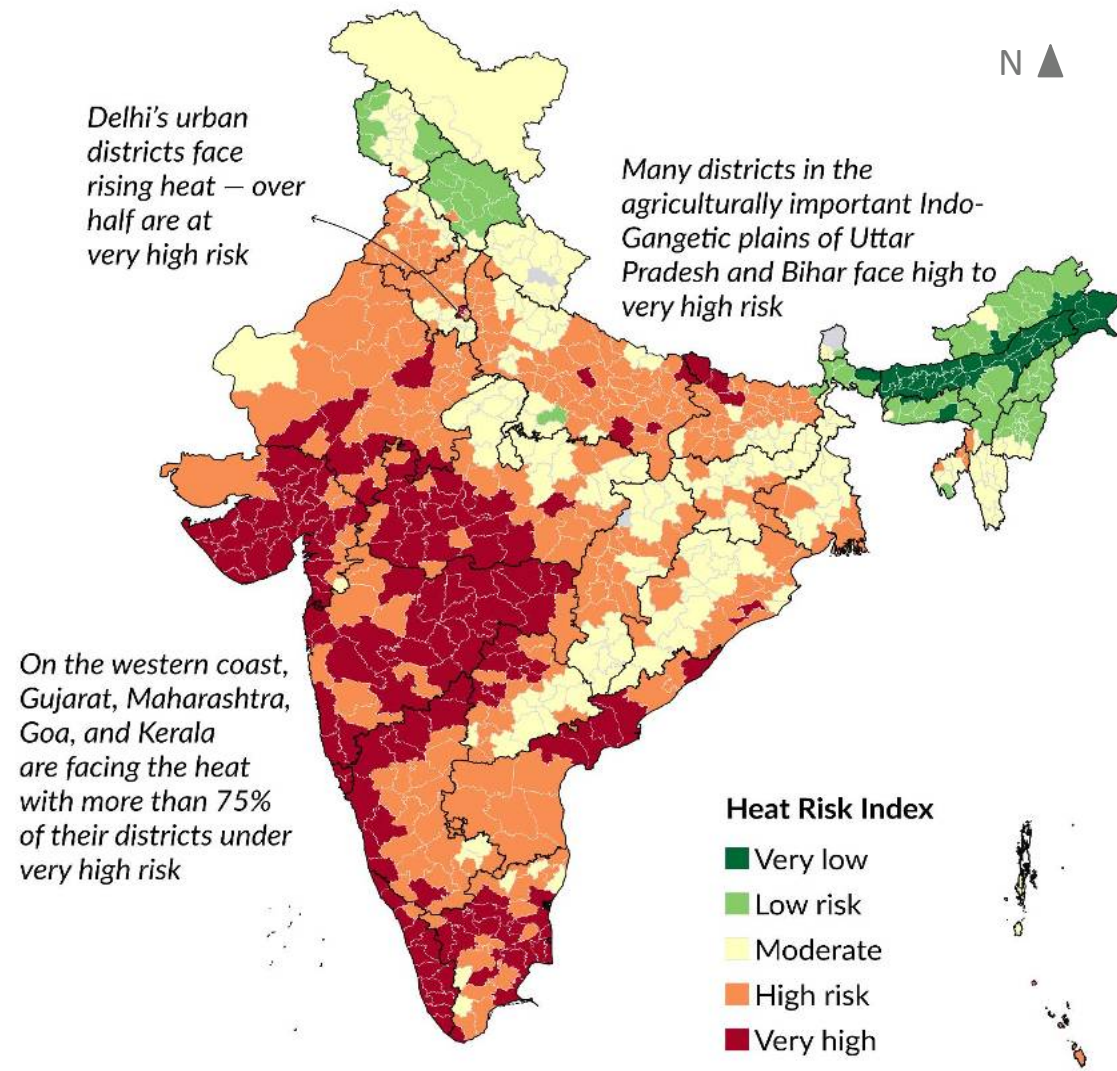
More 'very hot days', but even more 'very warm nights' — raising serious health concerns

North India is experiencing significant increase in summer relative humidity



The maps illustrate changes in (i) the frequency of very hot days\*, (ii) the frequency of very warm nights, and (iii) average daily relative humidity (%) over the past decade (2011–2022) compared to the climate baseline (1982–2011). These insights are derived from IMDAA hourly reanalysis data by IMD and NCMRWF.

# The conundrum of extreme heat in India



~ 57% of Indian districts, home to 76% of total Indian population are in high to very high heat risk category

Category	Number of districts
Very High	151
High	266
Moderate	201
Low	78
Very low	36

Top ten states and UTs: Delhi, Maharashtra, Goa, Kerala, Gujarat, Rajasthan, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, and Uttar Pradesh

## New South Asia Heat and Health Hub launched to strengthen regional response to extreme heat

Published: April 7, 2026

New Delhi

GHHIN, CEEW



Recognising this urgency of heat-health resilience, the **Council on Energy, Environment and Water (CEEW)**, along with its consortium partners, the **Natural Resources Defense Council (NRDC)**, the **Sustainable Futures Collaborative (SFC)**, the **United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)**, and **BRAC JPGSPH** have partnered to host the Global Heat Health Information Network (GHHIN) South Asia Regional Hub.

## Aims of the hub

### Connect

Connect institutions, practitioners, and policymakers across South Asia by building an enduring **Community of Practice (CoP)** and a **digital knowledge platform** that consolidates data, tools, and policy experiences across **India, Bangladesh, Bhutan, and Nepal**.

Enable regular interaction through **forums, masterclasses, and thematic working groups**, ensuring that national and local experiences are translated into **regional learning and global exchange**.

### Accelerate

Accelerate the generation and application of scientific evidence through **collaborative research, pilot projects, and open-access datasets** on **heat hazards, population exposure, and health vulnerability**.

The Hub will operationalise **Early Warning Systems (EWS)**, advance the integration of **health thresholds** into **forecast-based actions**, and promote **cross-sectoral** innovation linking heat resilience with **water, food, and cooling solutions**.

### Catalyse

Catalyse transformative policy and institutional change by embedding **heat-health resilience within national and local policies**, strengthening **health system preparedness**, and promoting **inclusive governance** that prioritises **gender, equity, and decentralisation**.

The Hub will **co-develop a Regional Heat-Health Policy Roadmap**, facilitate **ministerial briefings**, and ensure that evidence informs public investment and disaster management planning.

## South Asia Hub of the Global Heat Health Information Network (GHHIN)

### Steering Committee

Subject matter expert from multilateral institutions, government agencies, academic partners, and regional organisations.

### Hub Management Group (HBG)

Council on Energy,  
Environment and Water  
(CEEW)

Sustainable Futures  
Collaborative (SFC)

Natural Resources Defence  
Council (NRDC)

United Nations Economic  
and Social Commission for  
Asia and the Pacific  
(UNESCAP)

BRAC James P Grant  
School of Public Health  
(BRAC JPGSPH)

Hub Secretariat

Hub Coordinator, MEL Officer, Programme Officer and Communications Associate

**Dr Vishwas Chitale**  
Principal Investigator and  
Chair of the Hub

**Dr Bhargav Krishna**  
Co-Principal Investigator  
and Lead on Research and  
Policy Integration

**Mr Abhiyant Tiwari**  
Co-Principal Investigator  
and Lead on Capacity  
Building and Health  
Systems Strengthening

**Dr Madhurima Sarkar-  
Swaigood,**  
Regional Liaison and  
Integration Lead

**Prof Farzana Misha**  
Regional Lead – Climate,  
Health, and Community  
Resilience

Connecting Knowledge, Networks and Practitioners  
Accelerating Evidence and Innovation  
Catalysing Policy Action and Capacity Building  
Sustaining Impact through Cross-Learning

## By 2028, the Hub will establish



A **regional network of 60+ institutions** actively collaborating on heat and health



**15 open-access datasets** and technical tools to support planning and research



A **trained cadre of over 500 professionals** with **at least 40% women** in health, climate, and urban resilience



Policy frameworks and Heat Action Plans revised or developed in **at least four South Asian countries** using Hub guidance



Sustained financial commitments from **at least two additional donors or MDBs** for Phase II expansion

**SUSTAINABLE**   
 **FUTURES**  
 **COLLABORATIVE**

**NRDC**





# ESCAP

Economic and Social Commission  
for Asia and the Pacific



**BRAC** SCHOOL OF  
**JAMES P GRANT** PUBLIC  
HEALTH

## Prof Farzana Misha, BRAC JPGSPH



## Heatwave heroes by CEEW



CEEW video: [https://drive.google.com/file/d/1h8Ji6-H6OOFdOoMTQRsrHH\\_PwWFsfEJR/view?usp=sharing](https://drive.google.com/file/d/1h8Ji6-H6OOFdOoMTQRsrHH_PwWFsfEJR/view?usp=sharing)

## Building Resilience in the city of light Varanasi by NRDC



**Scan the QR code to partner with us**



**Thank you**

ceew.in | @CEEWIndia