SOUTH ASIA HYDROMET FORUM

Regional Integrated Multi-Hazard Early Warning System
RIMES

WISER
Weather and Climate Information Services

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Met Office

REGIONAL WORKSHOP ON IMPACT-BASED FORECASTING

Training-of-Trainers and National Demonstration Planning for Temperature-Related Hazards

Impact-Based Forecasting for Heat Wave & Cold Wave in India

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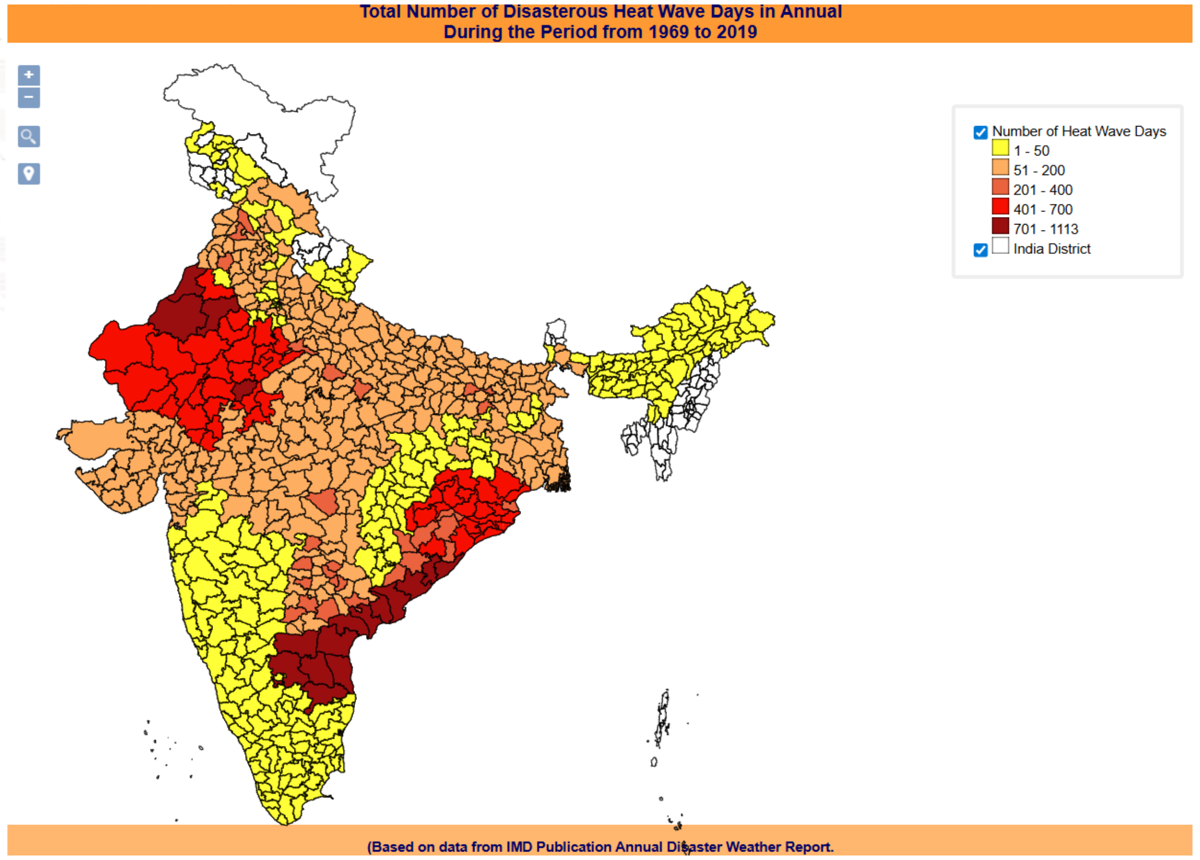
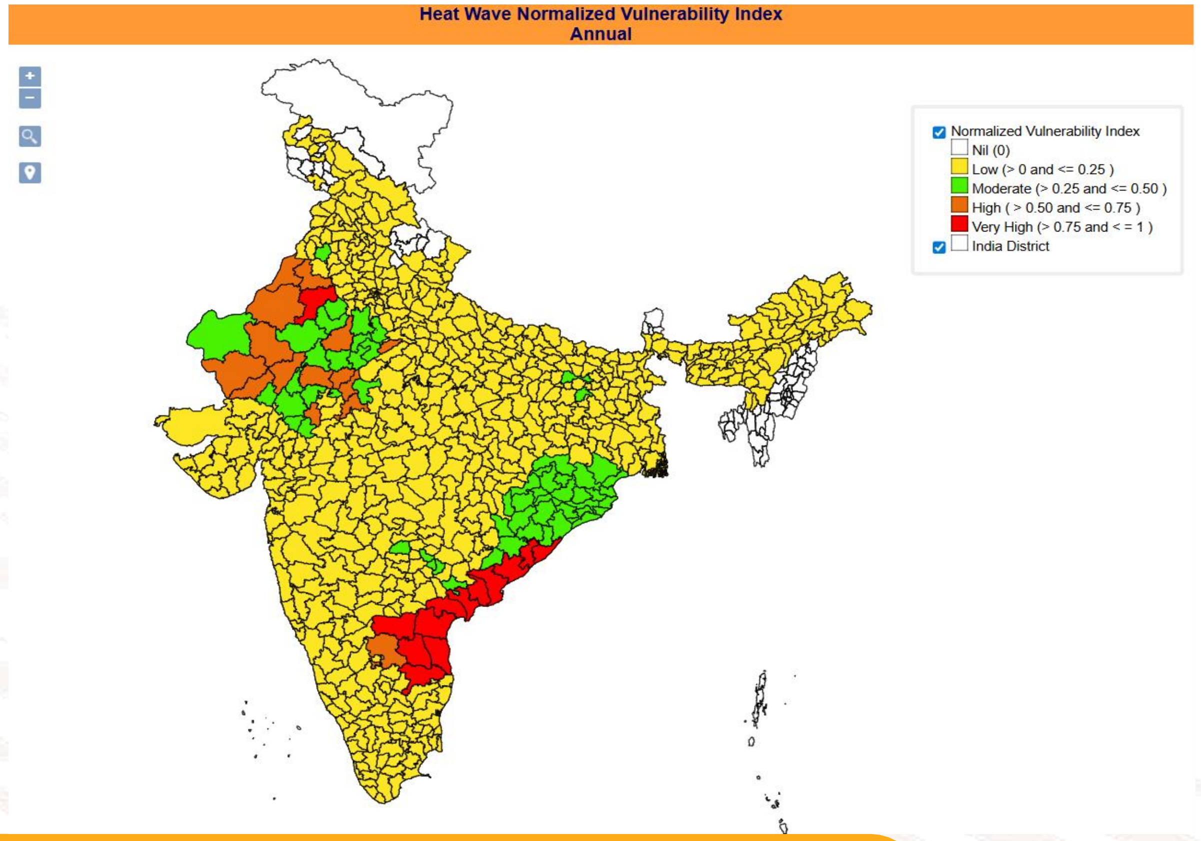
1. National Demonstration Plan Overview

A1. Proponent Information	• India Meteorology Department • Sector Agencies: ---NDMA, SDMA -State Administration - Irrigation & Waterways Department, Agriculture Department, Central Water Commission, Dam Management Authorities, Port, Shipping, Fisheries, Aviation Sector, Railways, Highway authority, Power Sector, Forest & Environment, Health Services, Tourism, Police, National Disaster Response Force, Indian Air Force, Indian Navy, Indian Coast Guard, Print & Electronic Media, Common People etc.
A2. Focal Contacts	• Organisation Cell, IMD New Delhi • Email: organisation.imdhq@imd.gov.in
A3. Demonstration Project Title	: Impact- Based Forecasting for Heat Wave & Cold Wave in India
A4. Geographic Scope	**: All Indian States**
A5. Seasonal Focus	o Heat o Cold o Both
A6. Duration of Demonstration	Already implemented operationally in all states in India

2. Temperature Risk Context and Intended Outcomes





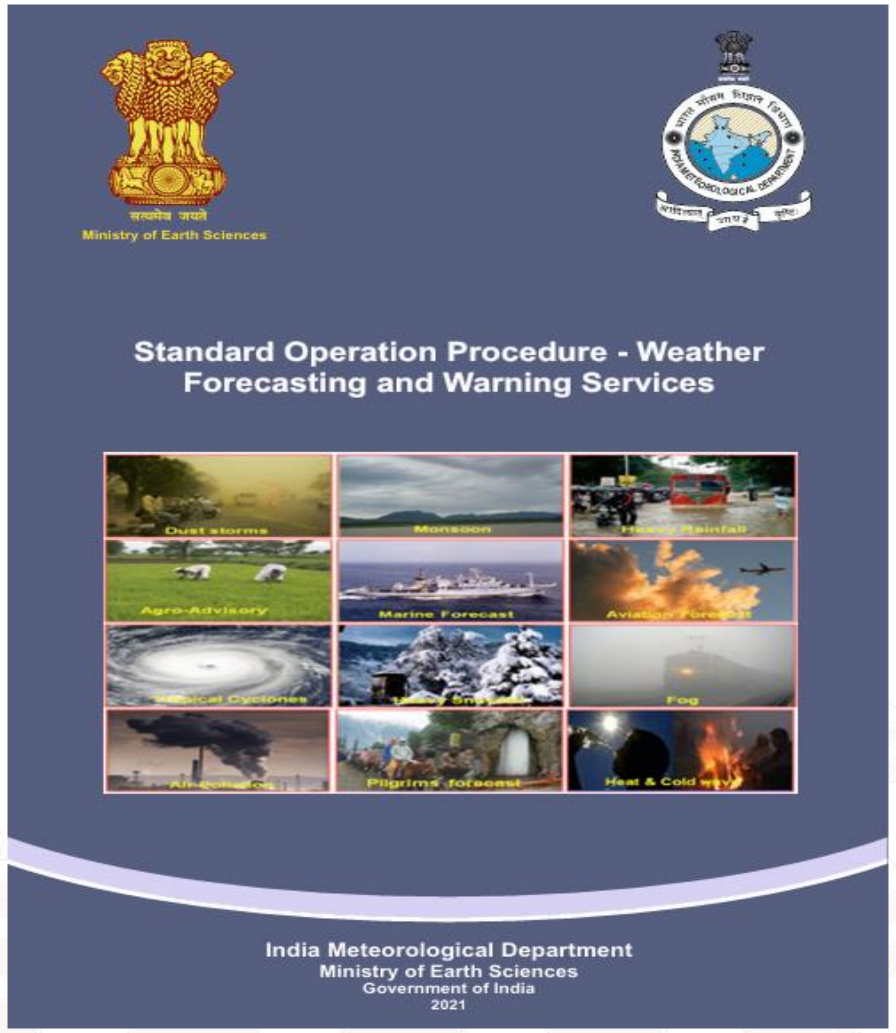
Key temperature-related risks in pilot area (who is affected, when, where, how)

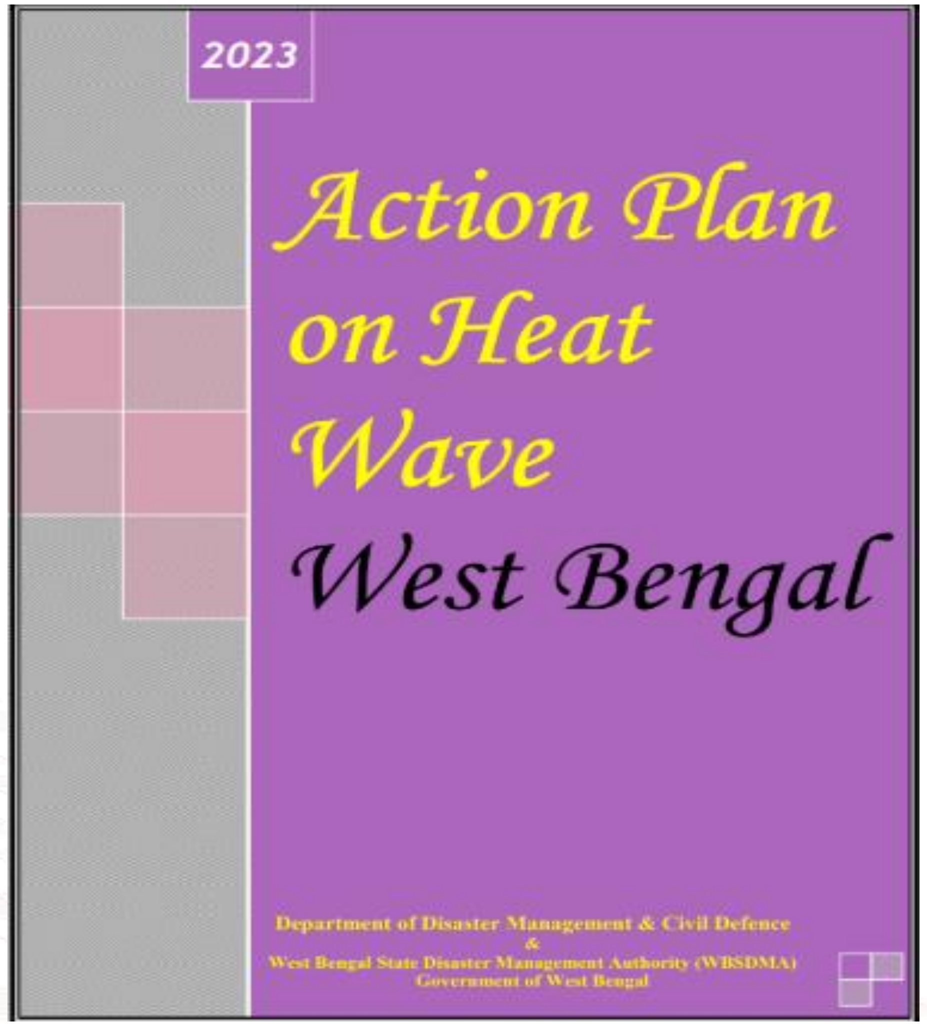
All stakeholders including common people; Heat wave during March-June; Cold Wave during December-February; Climatology & Vulnerability maps shows where and how affected.

Main gaps in current advisories / decision-making:
More detailed user specific IBF in process; More location specific impact data collection in digitized format.

3. Stakeholders, Roles, and Coordination Approach

There is Forecasting SOP of IMD and Heat Action Plan for different states. Very well coordination is established with all stakeholders with continuous interaction along with feedback mechanism.





5. Data, Indices, Triggers and Thresholds

- All observational data e.g. surface, upper level, satellite, radar etc. and exposure, vulnerability, impact data from concerned stakeholders / State agencies.

- Heat Index and other experimental indices for assessing potential for hazard & impact.

- Different thresholds for plane, coastal, hilly areas and separate impact tables for different regions for location specific IBF.

6. From Forecast to Action: Products, Communication & SOPs

- As per forecasting SOP
- Dynamic Impact Assessment
- Textual, Graphics, Audio, Video etc. for warnings
- Multi-channel dissemination

Future Plans for Impact based Forecasting (IBF) of Heat Waves:-

- Augmentation of Observational network for dense network of real time & continuous observations
- Research & Development for Improvement in specialized model/module for Heat Wave/ Cold Wave IBF
- More refined & dynamic Impact tables for separate regions
- More Automation of geospatial services
- **Easy accessibility of impact data from all the sectors.**

In Coordination with NDMA user specific IBF is in process.

Heat Wave + Health.
Heat Wave + Agriculture.
Heat Wave + Forest Fire.
Heat Wave + Transport.
Heat Wave + Energy.
Heat Wave + ……….

IBF requires domain expertise from the specific sector in addition to meteorological expertise. These teams could be tapping this multisectoral expertise in generating targeted forecast and warning services.

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