

“Early Planning, Early Action to help Heat Wave Risk Reduction”

With approximately 1.32 billion people, India is the second most populous country in the world with considerably high population density. There have been heat waves in India over past several years whereby a number of States/districts/cities/towns in India which have been severely and increasingly affecting health and livelihood of vulnerable populations.

NDMA Initiatives

In order to deal with the issues related to Heat Wave Risk Reduction, NDMA issued National Guidelines for Preparation of Action Plan – Prevention and Management of Heat wave in April, 2016. This provides a framework for implementation, coordination and evaluation of extreme heat wave related activities in India. Further, NDMA revised the



National Guideline on Heat wave in 2017 and again in 2019.

This contains, inter – alia, long term mitigation measures for addressing the issues at broader level by undertaking activities by states/local

authorities in their respective areas to reduce the negative impact of extreme heat-wave conditions.

After issue of Guidelines, NDMA further strengthened India's heat wave preparedness, and regularly organized Annual National Workshops on Heat wave in collaboration with one of the heat wave prone States to co-ordinate with all the stakeholders. NDMA facilitates the state governments in preparing Heat Wave Action Plan which spells out clear roles & responsibilities of each Department to prevent, mitigate and respond to Heat wave in respective states.

NDMA issues Advisories for managing heat wave to the central Ministries / Department, States, Districts and Municipal Corporations for taking appropriate actions. Review of heat wave preparedness through Video Conferencing with all heat wave prone states is also conducted. The National Disaster Management Authority is also focusing on community sensitization and awareness generation through Social Media, print/electronic media, advertisements and short TV commercial films on heat waves protection. NDMA launched a massive public awareness campaign and prepared new television commercials. NDMA has done “A Preliminary study to estimate temperature thresholds for the study for Heat wave warning for 103 Indian cities” This study, provides meteorological and heat-health warnings to alert decision-makers and the general public to impending dangers of heat wave. City-specific temperature thresholds can help to provide specific heat wave warnings for taking various preparedness and mitigation measures.

Apart from above, NDMA in partnership with academic institutions is conducting two specific research /studies project on heat wave related issues. First research is on “Assessment of Vulnerability and Threshold of Heat – related Health Hazards in four cities of India”. This study captures the gamut of the vulnerabilities of the local population due to heat waves by looking at the exposure, sensitivity and coping capacities of the people and second research is on “Framework for Heat Vulnerability Mapping and model Heat Action Plan for Indian Cities”. This study captures the Heat vulnerability linked to characteristics of individuals, buildings and urban structures. This project is looking at the possible climate change scenario and heat wave related concerns and develop a model heat action plan which can be used by other cities as a framework while developing heat action plan.

State and other stakeholder Initiatives

The concerned State Governments have also taken necessary mitigation measures for heat wave. During last few years, many State governments have prepared State Heat Action Plan and are implementing the suggested interventions. Based on these Action Plan’s, the State Governments and District administration take all possible measures to prevent mortality due to heat wave. Measures taken include adjustment of time slots for workers to avoid exposure to extreme hot weather and emphasis on laid an installing drinking water kiosks, supply of water through tanker, setting up of special shelter homes, increased access to health facilities and keeping stock of ORS packets in health centers and nearest anganwadi centres, maintaining a cooling system, construction of Gaushalas with fodder banks etc. Many States have appointed Nodal Officers to closely monitor the situation at the District and Block level. The efforts also include wide publicity through electronic and print media, Dos & Don’ts, and issuing instructions to all District Magistrates to take necessary action.

Impact of Actions Taken on Heat wave

In the past few years, despite Heat wave becoming a major challenge, the actions taken by Central /State governments, district administration, meteorological department, health department, and civil society in a planned way resulted in significant reduction in mortality due to heat wave from 2040 in 2015 to 1111 in 2016, 384 in 2017 and 25 in 2018.

In 2019, India faced more intense, severe, and prolonged period of heat wave as compared to the previous four years. NDMA and other state agencies took effective mitigation measures and the number of heat wave deaths could be restricted to 226 .In year 2020 and 2021, heat wave pattern was different due to spread of COVID 19 pandemic and subsequent lockdown measures. The mortality due to heat wave was recorded four deaths in 2020 and 2021.

Required early planning and preparedness of Heat wave

NDMA highlighted the ‘early planning for early action’ and the need to prepare Heat Action Plan for better preparedness to deal with heat wave. There is a need to be prepared for the heat wave season and take timely action to maintain the reducing trend of the impacts of heat wave.

In the light of the recent progress made and to continue with this momentum, we need to undertake extensive prevention, preparedness measurers and sensitize the people about the recent climate change effects as mentioned in the IPCC 2022 report and think about the sustainable long term mitigation measures to reduce adverse impact of heat wave.

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