सत्यमेव जयते
Government of Rajasthan

rspcb

INDIAN INSTITUTE OF PUBLIC HEALTH GANDHINAGAR

unicef
for every child

Rajasthan Climate Change Project

Heat Action Plan

(India's First Rural Climate Resilience Heat Action Plan)

(DMRD, RSPCB, Govt. of Rajasthan, UNICEF Rajasthan and IIPH-Gandhinagar Initiative)

ACKNOWLEDGEMENTS

The Heat Action Plan was developed with the advice and leadership of The Disaster Management and Relief Department (DMRD) and Rajasthan State Pollution Control Board (RSPCB), Government of Rajasthan. We have been guided and supported by experts in the fields of weather, climate and health and related disciplines. The experts involved brought the diversity of research, academic, intergovernmental and operational experience to this work.

Both Indian Institute of Public Health-Gandhinagar (IIPHG) and UNICEF, Rajasthan would like to extend gratitude to The Disaster Management and Relief Department, Government of Rajasthan and Rajasthan State Pollution Control Board, Government of Rajasthan for giving us opportunity to develop and implement India's first Climate Resilience Heat Action Plan for Rural Settings.

We would like to thank to all those who participated in situational analysis- Senior Officials of DMRD, RSPCB, Health Department, Education Department, District Collectors, District Health Officials, District Education Officials, DMRD officials at districts, Sub Divisional Officers, Block Health Officials, Block Education Officials, Medical Officers etc. for their significant inputs and perspectives.

We are thankful to CFO, UNICEF, Rajasthan- Mr Samuel Mawuganidze (till February 2017); Ms Isabelle Bardem (from April 2017 onwards) and Mr. Lars Bernd, Chief, DRR, UNICEF Country Office for his exemplary leadership and continuous support in implementing Rajasthan Climate Change Project for disaster risk reduction and prevention and management of heat related illnesses.

We wish to acknowledge the support of the DRR Section of UNICEF, Rajasthan for carrying out field activities and guidance in implementation of plan.

UNICEF, Rajasthan and IIPH-Gandhinagar are grateful for the contributions and commitment of various line departments for appreciating and scaling up such plans in other cities and rural settings of states.

The publication builds on the knowledge of several important projects such as Ahmedabad Heat Action Plan, implemented by the IIPH-Gandhinagar in collaboration with Ahmedabad Municipal Corporation- guided and supported by NRDC, USA.

We also appreciate the contributions of interns who worked in this project for carrying out community awareness, situational analysis and vulnerability assessment activities.

Dr. Dileep Mavalankar
Principal Investigator

Dr. Mahaveer Golechha
Co-Principal Investigator & Project Lead

Dr. P S Ganguly
Co-Principal Investigator

Index

Abbreviation

ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
BDO	Block Development Officer
CHC	Community Health Center
CSO	Civil Society Organization
DMRD	Disaster Management and Relief Department
IIPHG	Indian Institute of Public Health, Gandhinagar
ILR	Ice Lined Refrigerator
IMD	Indian Meteorological Department
MDG	Millennium Development Goals
MPHW	Multipurpose Health Worker
PHC	Primary Health Center
PPP	Public Private Partnerships
RRT	Rapid Response Team
RSPCB	Rajasthan State Pollution Control Board
SC	Scheduled Castes
SDO	Sub Divisional Officer
SDOA	State Disaster Management Authority
ST	Scheduled Tribes
UNICEF	United Nations Children Emergency Fund
UNPF	United Nations Population Fund
WHO	World Health Organization
WMO	World Meteorological Organization

Executive Summary:

Climate change is causing an increase in severity and frequency of extreme weather events and disasters. Heatwaves are among the most dangerous of natural hazards, but rarely receive adequate attention. They often lack the spectacular and sudden violence of other hazards, such as tropical cyclones, earthquakes, or flash floods. Even the related death tolls are not always immediately obvious.Increased heat waves have become more common with the increasing rate of global temperatures. Extreme heat can lead to dangerous, even deadly, health consequences, including heat stress and heatstroke resulting in deaths. India is also vulnerable to such impacts of climate change and the heat wave casualties over the past decades have increased. There have been 25,716 deaths recorded from 1992 to 2016 in various parts of the country. But this is most likely the tip of a iceberg. Therefore, actual deaths related to heatwaves could be much more than estimated.

There could have been many possible reasons, which are going to be exacerbated in coming years with growing urbanization, population and industrialization. The problem is further going to be magnified with ongoing climate change. According to estimates, the scenario is likely to become aggravated in coming years, and the World Meteorological Organization (WMO) predicts heat related fatalities will double in less than 20 years.

There are number of evidences suggesting that heat-related risks might be reduced through systematic development of heat wave early warning systems, alerting decision-makers and the general public to impending dangerous hot weather. It is important that public-health measures and advice on how to avoid negative health outcomes associated with hot-weather extremes are elaborated in advance of the events.

Rajasthan having a semi-arid climate records high day time temperature which are being more aggravated every year by the rising global temperatures. on 19th May 2016, Phalodi in Jodhpur district of Rajasthan recorded the day time temperature as 51 degrees Celsius, ranking third among all highest temperature documented globally for that day.

Under the guidance of the Disaster Management and Relief Department (DMRD)and Rajasthan State Pollution Control Board (RSPCB), Government of Rajasthan, Indian Institute of Public Health-Gandhinagar and Disaster Risk Reduction (DRR) Section of UNICEF, Rajasthan have developed and implemented Heat Action Plan (HAP) in selected blocks of rural Rajasthan. In the first phase on pilot basis this plan is being developed and implemented in Jalore and Udaipur districts. Rishabhdeo block of Udaipur district and Sanchore and Chitalwana blocks of Jalore districts were selected for implementing activities of HAP. This is India's first Climate Resilience Heat Action Plan for rural settings and block level heat action plan. The Jalore and Udaipur Districts were selected for implementing this project as these districts are experiencing temperature rise in last several years and their adaptive capacity is lower when compared to Barmer, Jaisalmer, Churu and other high temperature districts, where people are used to hot temperature.

In the first phase we have carried out various activities which involves conducting situational analysis, communication need assessment, discussion with stakeholders regarding understanding burden of climate sensitive diseases and heat related illnesses in Rajasthan. The HAP also involves approaches for assessing heat stress, heat-intervention strategies, communication strategies, and evaluating the intervention.

On the ground climate preparedness actions are crucial components to the global fight against climate change and are particularly focused on protecting the communities that are most vulnerable to the short and long term effects of climate change.

It is hoped that the HAP will act as a catalyst for bringing together key players from line department and policy-makers, as well as the general public, for initiating action concerning the overall management of heat as a hazard. Growing concerns over climate change have brought to the fore three important aspects: adaptation, disaster risk reduction and the need for climate information and services to support these. The HAP brings together these three facets and exemplifies an effective demonstration of disaster risk reduction in practice. We expect this plan to enable various department of Government of Rajasthan to provide effective strategy prevention and management of climate sensitive diseases and heat related illnesses.

The Plan creates immediate and longer-term actions to increase preparedness, information-sharing, and response coordination to reduce the health impacts of extreme heat on vulnerable populations.

The Heat Action Plan aims to implement the following key strategies:

- ***Establish Early Warning System and inter-agency coordination***
  To establish the early warning system and inter-agency coordination to alert the community regarding sudden high and extreme temperatures. Creating formal communication channels to alert governmental agencies, the Met Centre, health officials and hospitals, emergency responders, local community groups, and media outlets of forecasted extreme temperatures.

- ***Preparedness at the local/Primary level for health and education department***
  To implement capacity building and training programmes for health care professionals at local level to recognize and treat the heat related illnesses as early as possible in order to reduce emergency admissions in the hospitals. Such trainings focus on primary medical officers and other paramedical staff such as FLW's, community health staff as well as school teachers so they can effectively prevent and manage heat-related cases so as to reduce mortality and morbidity.

- ***Health system capacity building***
  Standard Treatment Guidelines (STGs)and Treatment regimens for heat related illnesses so as to recognize and respond to heat-related illnesses, particularly during extreme heat events.

- ***Public awareness and community outreach***
  To increase public awareness and community outreach by dissemination of awareness messages in the community about how to prevent themselves from exposure to extreme temperatures by using IEC material, posters, banners etc. Do's and Don'ts for people to follow.

- ***Collaboration with non-government and civil society***
  Collaborations with non-governmental organizations and civil organisations to develop the 'Public Cooling Places' at public places. In addition to this, few activities like building temporary shelters, streamlining of drinking water delivery systems and other innovative measures are planned.

- ***Assessing the impact (feedback for reviewing and updating the plan)***
  To carry out case Surveillance, Monitoring, evaluation and supportive supervision in routine manner to assess the impact of heat. Heat action plan updating will be done timely as per need. Mapping exercise of high risk areas and identification of vulnerable population and heat health risks, Development of effective strategies, activities and output indicators as well as response planning addressing heat risks.

Government Departments involved:

Apart from the DMRD and RSPCB, Public Health Department, District and Block Administration, Public Health Engineering and Education Department, etc. are also involved in the activities to streamline the quick responses for prevention.

Heat action Plan includes the strategies for prevention of deaths from heat waves, process indicators or activities and output indicators. Outcomes will be assessed on the basis of the implementation progress of the plan. Plan focuses on mapping of vulnerable population from the block and strategies to protect them. Heat action plan helps to train the health workers who work in the community very closely to people and can provide early diagnosis and treatment.
Action Plan focuses on communication and awareness strategy for public.

It is the anticipated that Government of Rajasthan in collaboration with Disaster Risk Reduction Section of UNICEF, Rajasthan and Indian Institute of Public Health-Gandhinagar will develop and implement such action plans in other cities and rural areas of Rajasthan. Further, this action plan will act as a model or templet to other urban and rural areas in Rajasthan to adapt and develop specific measures of preventative action to reduce deaths as the weather becomes progressively hot and more extreme.

Background

Geographically Rajasthan is the eighth most populous and land area wise largest state of India. 80% of the population depends on agriculture and 19% on animal husbandry for their livelihood. The Aravalli range of hills starting from Gujarat and passing through the state from south west to north east and going up to Haryana divides the state in to two physiographic divisions. The regions lying north of Aravalli range is mostly desert in nature. The region in south and south-east of Aravalli is a diversified region for agricultural purposes, studies claim that the southern parts are now progressing towards Hilly desserts. Uneven distribution of socio-economic and cultural factors affects various population groups and capacity to respond as well as to adapt to the hazards. Lack of adequate provision of many essential determinants of health such as access to safe drinking water, adequate sanitation systems, diet and nutrition, safe housing and gender equality play a crucial role in establishment of vulnerability among the population. The rural Rajasthan is dually vulnerable than the urban because of lack of awareness, poor access to healthcare and access to cooler places. Rajasthan is one of those states having hottest districts of India.

Children and elderly are most affected by the climate change and climate sensitive diseases. The developing bodies of children are sensitive to environmental hazards such as heat waves and the spread of infectious disease and damage experienced during these initial years can have lifelong impacts. In 2007, it is found that more than 200 million children under five years of age in developing countries do not reach their development potential due to poverty, malnutrition and poor health which disrupts their cognitive, physical and socio-emotional development after exposing to hazardous pathogenic agents. Apart from that, lower resistance and poor access to preventive interventions contributes to major part of these causes. Older persons are at risk because of higher rates of comorbidity medications use, immobility and blood volume depletion.

Heat Waves is one of the biggest issues facing the world today it is not a new phenomenon in the Earth's history. It's a one of the most seen reaction of Climate Change. Climate Change refers to a significant variation in either the mean state of the climate or in its variability, persisting for an extended period, typically, decades or longer. Climate change scenario has notable detrimental effects such as droughts resulting into food insecurity and increased malnutrition, migration, and diminished water resources etc. Studies indicate that the decade (2007-2017) across the globe recorded the warmest years during the past century, the three years viz. 2015,2016, and 2017 recording warmer conditions, increasing in sequence.It is predicted that by year 2099 earth average temperature will rise 3-6 ° C, which will lead to many more severe heat waves.

Situational analysis:

As per census 2011, the area of Rajasthan state 3,42,239 sq. km and the total population is 6.86 crores (5.66 percent of Indian population). Out of which more than 2/3rd people live in rural part. 'Thar' desert area consists of 12 districts covering, 60percent area of the state and 40percent of the entire state population. Rajasthan contributed 9.1percent of India's total livestock emissions. In the matter of transport, as total number of the registered vehicles has increased in the state by six times from 1990 to 2009 (GoR 2010c).
Looking at the larger picture, In Rajasthan the rural areas are largely neglected in terms of climate change and its impact on health. And, very less work is done about Community perception and awareness, which is important for developing adoption strategies.

Therefore, we have carried out rapid situational analysis for understanding community perspective, specific need and gaps. In our assessment we have found than only 27 percent respondents were aware about what is climate change. The study carried out was a cross-sectional survey of residents of these two blocks. A total of 150 households were selected randomly and survey completed by a structured questionnaire. This was supplemented with 10 key informant interviews(KIIs) and some informal talks.

Overall, 98.33 percent of the respondents reported that the heat during the summers had increased and 96.66 percent reported that rainfall pattern had changed, 83.33 percent reported that ground water level gone down, 85.33 percent stated decrease in crop production compared to previous experience. Only 8.66 percent respondent were looking for weather forecast daily and almost 50.66 percent never looked for any weather forecast. KIIs and informal talks also reported that summers and winters were warmer than previous years.

The concept of "Climate Change" is relatively new in rural areas although they had clear perceptions about changes in heat, cold and rainfall patterns that had occurred over the last five to ten years. Local perceptions of climate change include overall warmer winter and increased heat in summer with changing patterns of precipitation. The effect of climate change was mostly related to decrease in ground water level and its effect on livelihoods, livestock and health. Most local perceptions are consistent with the evidence regarding the vulnerability of rural areas to Climate change. Rural Rajasthan has dual burden of Climate change because of absence of awareness and second lack of resources for treatment and adaptation. The systemic collection of these information will enable policy makers, researchers and scientists to design and implement different action plans and strategies for climate change in rural areas which are more vulnerable.

Criteria for Heat Wave

World Meteorological Organization (**WMO**) defines heat wave as five or more consecutive days during which the daily maximum temperature exceeds the average max temperature by 5° C

Extreme heat events in India pose a serious danger to the people. The spells of hot weather are often seen to move from one region to another. This phenomenon is termed as 'Heat wave'.[7]
(As defined by Indian Meteorological Department)

Heat wave need not be considered till maximum temperature of a station reaches at least 40° C for Plains and at least 30° C for Hilly regions.

When normal maximum temperature of a station is less than or equal to 40° C
- Heat Wave Departure from normal is 5° C to 6° C
- Severe Heat Wave Departure from normal is 7° C or more

When normal maximum temperature of a station is more than 40° C
- Heat Wave Departure from normal is 4° C to 5° C
- Severe Heat Wave Departure from normal is 6° C or more

When actual maximum temperature remains 45°C or more irrespective of normal maximum temperature, heat wave should be declared.

Rationale of Heat wave action Plan:

May is typically the hottest month in India with temperatures reaching up to45°C in certain areas before the cooling southwest monsoon rains arrive in July. In this season, it is an utmost priority to prevent heat related illnesses in the vulnerable population especially, children, elderly as well as the slum population who. The need of the moment is to have a plan to help them for adaptation to the temperature changes. As climate change as well as Global warming, are the broad issues needed the coordinated action. Human induced climate change increases the probability of occurring the heat events as well as susceptibility to such heat events. On 19th May 2016, Phalodi in Jodhpur district of Rajasthan recorded the day time temperature indicating 51° C. It ranked as third highest temperature globally. Most of the places in Rajasthan recorded day temperature more than 46 ° C on that day and top seven highest day time temperatures in India were found from Rajasthan state. From the fact that, 16 heat related deaths and increased admissions in hospitals are reported in Rajasthan on the day of highest temperature. Hence, the necessity of having a proper action plan on priority basis is ratified during the dialogues.

Clarity and sound understanding is needed about roles and responsibilities of various department involved in action, sharing of data, triggers of activation, mapping of vulnerable populations and analysis of extreme heat wave impact etc. As 'heat wave' is not a notified disaster at national level in India, accurate information and data related to heat wave deaths and illnesses are not available. In order to take appropriate action, the mortality data as well as weather data need to be gathered. Development of heat action plan is the step ahead to guide and help the officials to get clarity on their role for developing sound coordination. The HAP will help reduce impacts of heat wave on health.

In the past, Ahmedabad was the first city in India to develop the heat wave action plan in 2013, at urban level in whole of south Asia. In the context of this, **'Heat Action Plan'** is the important step ahead to develop the heat wave action plan in rural set up of Rajasthan and will become cornerstone of environmental health in Rajasthan in order to mitigate the issues.

Implementation of Heat Action Plan:

The purpose of heat action plan is to provide the framework for implementation, co-ordination, evaluation of extreme heat response activities in rural set up of Rajasthan for reducing the negative impact of heat.

The plan helps to identify the at-risk population, the hot spots (at risk places where extreme heat conditions may arise) and to take appropriate administrative as well as preventive action to deal with extreme heat events.

Key Components of Heat Action Plan:

Heat wave action plan is required in order to prevent and mobilize the individuals to help and protect themselves and their neighbors, friends, relatives etc. from extreme spells of heat wave.

There are few important components to implement heat action plan at various levels

- To establish the early warning system and inter-agency coordination to alert the community regarding sudden high extreme temperatures through radio, banners or other medias
- To implement capacity building or training programmes for health care professionals at local level to recognize and treat the heat related illnesses as early as possible in order to reduce emergency admissions in the hospitals.
- Mapping exercise of high risk areas in the blocks selected.
- Identification of vulnerable population and heat health risks specific to each group.
- Development of effective strategies, activities and output indicators as well as response planning addressing heat risks.
- To increase public awareness and community outreach for dissemination of awareness messages to community how to protect themselves from extreme temperatures through IEC material. Do's and Don'ts protocols are being established. Treatment regimens for heat related illnesses are developed.
- To carry out case surveillance, monitoring, evaluation and supportive supervision every year to assess the impact of heat. The updating of heat action plan is being done timely.
- To make collaborations with non-governmental organizations and civil societies to maximize and improvise the 'cool public places' such as public bus stands etc., building temporary shelters, streamlining of drinking water delivery systems in public areas and other innovative measures to tackle heat waves.

- Collaborated with academic institutions to measure the impact and document the experience.

Roles and Responsibilities of various departments:

There needs to be clarity about the roles and responsibilities for actions for the management of heat wave in Rajasthan. The proper leadership is necessary for preparation and response to heat wave. The DMRD may act as control agency or nodal agency and other departments such as department of health and family welfare, department of education, district and block administration, public health engineering department can act as support agency for providing resources like human resources, services, drinking water, IEC materials etc. In administrative context, Sub Divisional Officer (SDO)may execute the heat action plan related activities in a block. Block Development Officer (BDO)acts as a coordinator for disaster management and relief department as well as forest department. Block Chief Medical Officer (BCMO)is the nodal officer for health department activities at block level. Though he has all controlling powers for PHCs, sub centers etc., Chief Medical and Health Officer (CMHO) acts as supervisor for Community Heat Centers (CHCs) and can lead activities at district level. From education department, Block Education officer (BEO) will be responsible for coordinating action regarding heat action plan in schools. Public health engineering department has executive engineer as well as junior engineer who will handle all the matters of water and sanitation as well as construction in rural areas and towns.

The steps include:

1. Explicit forecasting of extreme heat event along with frequency as well as intensity needs to be done by Indian Meteorology Department (IMD).
2. Recognizing the severity of heat waves in Rajasthan by collaborating various government agencies as well as civil societies.
3. Immediate notification to public and other stake holders is very crucial to ensure the status of heat action plan.
4. Mapping exercises of the concerned high risk and vulnerable areas is to be done.
5. Heat wave alerts with the help of various forms of media will be issued at grass root level.
6. Coordinated action efforts among government departments, health care professionals, emergency medical staffs, hospital staffs and community groups are required for successful implementation.

Heat wave alerts based on thresholds determined in Ahmadabad Heat Action Plan 2016, are adopted. It is given as follows.

Yellow alert	Hot day advisory	41.1- 43-degree C
Orange alert	Heat alert day	43.1- 44.9-degree C
Red alert	Extreme heat alert day	≥ 45-degree C

Source: Indian Meteorological Department, http://imd.gov.in/section/nhac/termglossary.pdf The Meteorological Centre, Ahmedabad ("Met Centre") currently determines whether to declare a heat wave once the daily maximum temperature exceeds a 40°C (104°F) threshold.

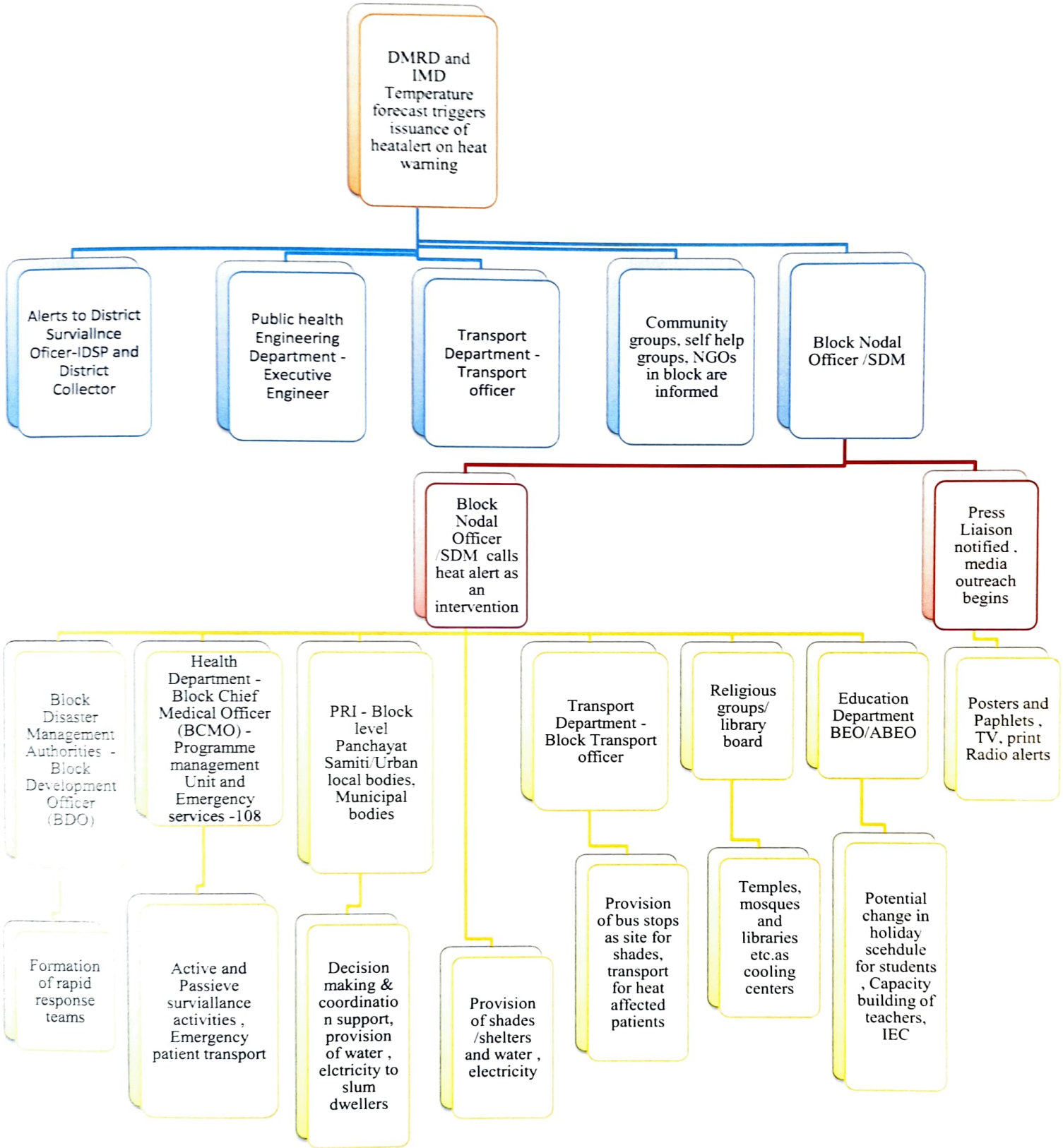


Figure 1 Communication Plan of Nodal Officer with various Department Officials

Heat Action Plan Objectives, Strategiesand Activities:

Objectives:

1. **Develop, implement, co-ordinate and evaluate** Climate Resilience Heat Action Plan in rural and block level setting
2. **Developing technical material** for health promotion and communication in local language, development of climate resilience plans, capacity building of various stakeholders in collaboration with technical partners.
3. **Capacity building of various stakeholders**- block administration, block health department, education department and other line department
4. **Assess Impact of climate change** to understand impact of climate change on health and climate sensitive diseases

At Block level, there is a need to appoint 'Nodal officer' for monitoring and supervision of this heat related activities. The appointed nodal officer is responsible for coordination, communication and providing support to all concerned officials. Block Nodal officer would be doing the preparations under Heat Action Plan (as given in Agency action checklists).

The action plan will be implemented in three phases, given as follows.

(A). Strategies and Activities in Pre-Heat Season (Annually from January through February)

(B). Strategies and Activities during the Heat Wave Season (Annually from March through July)

(C). Strategies and Activities in Post Heat Season (Annually in July through September)

(A). Strategies and Activities in Pre-Heat Season (Annually from January through March)

1. Block Nodal Officer/Sub Divisional Officer (SDO)

Strategy1.1: To establish an early Warning system and inter-agency coordination

- **Activity: 1.1**

1.1.1. To identify key agency leaders and linking them (DC, BDO, BCMO, BEO, Executive Engineer, local NGOs leaders etc.)

1.1.2. Facilitate internal communication with community groups, local agencies working on environmental health, State and district officials, medical colleges, municipal bodies of towns and various public private partnerships (PPPs) in the district.

- **Output indicators 1.1**

1.1.1 Number of coordination meetings done
1.1.2 Number of inter-sectoral meetings and dialogues done.
1.1.3 Number of banners/posters/hoardings prepared as a part of early warning.

Strategy 1.2: To implement capacity building through training programmes for health care professionals

- **Activity: 1.2**

1.2.1. To organize trainings for healthcare workers, teachers, community members and school children.

1.2.2. To conduct monitoring and supervision of processes or activities related to trainings.

Output indicators 1.2

1.2.1.Number of trainings organized for medical officers and healthcare workers in one year

1.2.2 Number of trainings conducted for teachers and school children.

1.2.3. Number of trainings conducted for community leaders, NGO coordinators

Strategy1.3: To make collaborations with non-governmental organizations (NGOs) and civil societies(CSOs)

- **Activity 1.3**

1.3.1. To identify and list all NGOs as well as CSOs working in the block

1.3.2. To establish public private partnerships and collaboration with NGOs for community mobilization and better outreach implementation programmes.

1.3.3. To map the block and identify the high-risk areas in the block, vulnerable to heat waves for focused course of action with the help of CSOs and NGOs.

- **Output indicators 1.4**

1.3.1.Numberof meetings made with NGOs as well as CSOs.

1.3.2. Number of NGOs or private players collaborated.

1.3.3. Number of people assessed for vulnerability.

2. Media, Press and Communication Officer:

Strategy 2.1: To increase public awareness and community outreach for dissemination of awareness messages

- **Activity: 2.1**

2.1.1. Printing of pamphlets and advertisements on heat stress prevention and tips for health protection during extreme heat events

2.2.2. Focus outreach efforts for identification of high risk villages.

2.2.3.Collect and distribute to health and education department information and heat communication materials developed by Government of Rajasthan, UNICEF and IIPH-Gandhinagar.

- **Output indicators 2.2**

2.2.1 Number of pamphlets and posters obtained.

3. Block Chief Medical Officer (BCMO) / Chief Medical and Health Officer (CMHO) - Health Department:

Strategy 3.1: To establish the early warning system and inter-agency coordination

- **Activity: 3.1**

3.1.1Purchase and distribute reusable soft plastic ice packs in block as well as in all sub centers (outreach level), PHCs, CHCs and 108 ambulances.

3.1.2. Train staff for heat focused examination procedures in Primary Health Centers (PHCs) and Community Health Centers (CHCs).

3.1.3. As a matter of precaution, Health Department ensure the availability of deep freezers, ILRs and Vaccine carriers at the cold chain points in the high focused area to maintain the coverage of full immunization.

❖ **Output indicators 3.1**

3.1.1. Number of soft plastic ice packs distributed in the block at SC, PHC, CHC and SDH level.

3.1.2Number of discussions/dialogues held for adoption of heat focused examinations in PHC/CHC.

3.1.3. Number of medical officers who trained for heat focused examination procedures.

3.1.4. Percentage of cold chain points functioning properly in pre- heat season.

Strategy 3.2: To implement capacity building or training programmes for health care professionals

➢ **Activity: 3.2**

3.2.1 To intensify targeted training programmes, capacity building efforts especially for the medical officers and health workers-ANMs and ASHAs in heat affected areas.

3.2.2. To impart trainings to improvise the practice of documenting the cause of death on death certificates.

3.2.3. To incorporate 'IEC' as a component in training module while training heath officials.

❖ **Output Indicators 3.2**

3.2.1. Number of trainings conducted for medical officers and health workers-ANMs and ASHAs in heat affected areas.

3.2.2. Number of IEC focused trainings conducted for medical officers and health workers.

Strategy 3.3: To develop communication strategy and IEC training for public awareness and community outreach during heat season

➢ **Activity 3.3**

3.3.1. Develop communication strategy for local rural health facilities and heat affected community groups with the help of medical, paramedical staff, field staff etc. based on the Framework for health professionals.

3.3.2. Develop behavioral change programmes such as drama, street play in the villages to give the friendly preventive and awareness message to the people.

❖ **Output indicators 3.3**

3.3.1 Number of IEC material developed

3.3.2 Number of staff trained for communication strategy

3.3.3. Number of Dramas or street plays developed for giving awareness messages regarding heat wave and illnesses as a part of climate change awareness.

Strategy 3.4: To make collaborations with non-governmental organizations and civil societies and private practitioners, trust hospitals etc. for implementing various activities of HAP

➢ **Activity 3.4**

3.4.1. Identify and list various NGOs and CSOs running hospitals

3.4.2. Train staff working at NGOs and CSOs hospitals for heat focused examination procedures

Output Indicators 3.4

3.4.1. Number of NGOs and CSOs identified and listed

3.4.2. Number of health staff trained for heat focused examination procedures at NGOs and CSOs hospitals

Strategy 3.5: To carry out monitoring and surveillance

➢ **Activity 3.5**

3.5.1. Develop a'Rapid Response Team'(RRTs) along with disaster management officials for carrying out monitoring and surveillance in high risk area.

3.5.2. To conduct supportive supervision of medical officers at PHCs/CHCs level routinely.

❖ **Output Indicators 3.5**

3.5.1. Number of RRTs formed.

3.5.2. Number of monitoring visits conducted in the heat focused villages.

3.5.3. Number of supportive supervision visits conducted.

4. Block Education Officers (BEO), Community Groups and individuals:

Strategy 4.1: To implement capacity building or training programmes for teachers, education department officials and students

- **Activity4.1**

4.1.1. Under the leadership of Block Education Officer (BEO) or Additional Block Education Officer (ABEO), conduct child friendly educational trainings and distribute heat protection materials at local schools in rural areas.

4.1.2. Build capacity among teachers about protection from heat and equip them with the separate awareness module, material which they can disseminate in classrooms and they can make activities that can engage students regarding extreme heat effects on health.

4.1.3. Conduct training workshops and outreach sessions with community Self Help Groups (SHGs) and community mobilizers like AWW or Multipurpose Health Workers (MPHW).

- **Output indicators 4.1**

4.1.1 Number of child friendly education trainings conducted.

4.1.2 Number of teachers trained, education department officials and students for heat wave awareness.

4.1.3. Number of awareness modules distributed among schools.

4.1.4. Number of community mobilizers capacitated.

5. Executive Engineer-Block Public Health Engineering Department:

Strategy 5.1To collaborate with non-governmental organizations and civil societies

- **Activities 5.1**

5.1.1. Construction of shelters and cooling public places in the identified heat affected areas.

5.1.2. Provision of drinking water at water points in various vulnerable areas and work sites of block.

- **Output Indicators5.1**

5.1.1. Number of shelters/shades built in the block.

5.1.2. Number of 'Public cooling spaces' formed.

5.1.3. Number of drinking water points developed in block.

(B). Strategies and Activities during the Heat Wave Season: (Annually from March through July)

1. Block Nodal Officer/ Sub Divisional Officer (SDO):

Strategy 1.1: To establish the early warning system and inter-agency coordination

- **Activity 1.1**

1.1.1. Activate the heat alert and the local response block wide when extreme temperature is forecasted.

1.1.2. Monitor and increase the heat alert level when necessary to match the severity of the forecast and threshold established along with the Block Nodal Officer conveying the same in a special meeting assembling of key agency leaders.

1.1.3. Conduct frequent, possible daily, conference calls to discuss reports and breaking developments during heat alerts and ensure that communication channels remain operational.

1.1.4. Identify and set up public displays of temperature at places in the block with more population.

1.1.5. Continue passive and active surveillance of temperature data and forecasts along with monitoring of vital indicators.

1.1.6. Notify the steering committee and relevant agencies when heat alert is over.

- **Output Indicators 1.1**

1.1.1 Frequency of activated alerts.
1.1.2 Number of special meetings conducted at the time of extreme temperatures
1.1.3 Number of conference calls made during the summer.
1.1.4 Number of monitoring visits made to the various part of block.

Strategy 1.2:To make collaborations with non-governmental organizations and civil societies

- **Activity 1.2**

1.2.1. Development of cooling centers in places such as temples, public buildings, schools, colleges etc. during heat wave season. Provide access to drinking water and electricity to vulnerable populations.

1.2.2. Provide temporary shelters for affected populations. Assure night shelters stay open all day for migratory populations during a heat alert. Expand access to shaded areas for outdoor workers, slum communities and other vulnerable populations.

1.3.3. Increase the efforts to distribute the fresh drinking water to the public, expansion of potable water access during heat alert at religious places including temples and mosques etc.

- **Output Indicators 1.3**

1.3.1. Number of cooling centers developed

1.3.2. Number of night shelters constructed.

1.3.3. Number of people used shelters/shades during heat events.

2. Media, Press and Communication Officer:

Strategy 2.1:To increase public awareness and community outreach for dissemination of awareness messages

- **Activity 2.1**

2.1.1. Initiate public awareness about the dangers of heat related illnesses involving the 'Block Nodal Officer' via press conference.

2.1.2. Circulate bulk warnings to the public via centralized email databases during heat alert.

2.1.3. Develop an SMS alert system to send direct messages to the community members, school headmasters, private practitioners and other important stakeholders

2.1.4. Use local radio to disseminate heat protection tips and high temperature warnings to the high-risk community in rural areas during heat wave period.

2.1.5. Explore other ways of communication such as social media e.g. WhatsApp mobile application/Instant messaging.

- **Output Indicators 2.1**

2.1.1. Number of press conferences arranged for dissemination of awareness messages.

2.1.2. Frequency of bulk warnings sent via email

2.1.3. Number of SMS alerts sent during heat wave period

2.1.5. Number of people accessed through WhatsApp/Instant messaging.

3. Block Chief Medical Officer (BCMO) / Chief Medical and health officer (CMHO)-Health Department:

Strategy 3.1: To strengthen the early warning system and inter-agency coordination to strengthen the health services.

➢ **Activity 3.1.**

3.1.1. To ensure the preparation for heat wave related illnesses by Block Chief Medical Officer (BCMO) as well as Medical officers of PHCs and CHCs is being assured. Case audit conduction during heat season is being streamlined.

3.1.2. Ensure adequate Medical and drug supplies availability especially for heat focused areas.

3.1.3. Weekly reports of public health impact for SDO/Block Nodal Officer during heat wave alert.

3.1.4. Manage Human Resources and Infrastructure as per influx of patients during heat wave alert.

3.1.5. Focus more on high risk villages having vulnerable population in the relation of health service delivery, human resources and infrastructure.

3.1.6 Recruitment of new health workers as per feasibility and requirement.

❖ **Output Indicators 3.1**

3.1.1 Number of drugs supplied during heat wave period

3.1.2 Number of reports submitted during heat wave period

3.1.3. Frequency of indents made during heat wave period

Strategy: 3.2To increase public awareness and community outreach for dissemination of awareness messages

➢ **Activity 3.2**

3.2.1. Educate the patients and the general community about heat related illness post exposure, prevention tips and how to stay cool at health facilities (Sub-centers/PHCs/CHCs/UHCs).

❖ **Output Indicators 3.2**

3.2.1. Frequency of the education meetings to the patients as well community during heat wave period.

3.2.2. Number of Rapid Response Teams formed in block during heat wave.

4. Block Education Officers (BEO/ABEO), Community Groups and individuals:

Strategy 4.1:To increase student's awareness and community outreach for dissemination of awareness messages

➢ **Activity 4.1**

4.1.1. Continued activity of awareness and knowledge dissemination in schools for students and teachers both.

4.1.2. Educate family members or neighbors as well as community members about Do and don't protocol for heat wave prevention.

❖ **Output Indicators 4.1**

4.1.1. Number of awareness and knowledge dissemination activities conducted during heat wave period.

4.1.2. Number of families educated about heat related events and prevention strategies during heat wave period.

5. Executive Engineer-Block(Public Health Engineering department)

Strategy 5.1Shelters and shades, water, electricity for the vulnerable population

➢ **Activity 5.1**

5.1.1. Keep checking that constructed shades/shelters are in place and are useful to the community. Repair if needed-on priority basis.

5.1.2. Provide potable drinking water in certain areas with water scarcity; even ensure that work places have adequate water provision.

❖ **Output Indicators**

5.1.1 Number of shelter repairs done during heat season.

5.1.2. Number of potable drinking water points developed during heat season.

5.1.3. Number of shelters formed at bus stops during heat season

(C). **Strategies and Activities in Post Heat Season (Annually in August through September)**

1. Block Nodal Officer/SDO

Strategy 1.1: Evaluation meetings and Performance Assessment

➢ **Activity 1.1**

1.1.1. Organize an annual Heat Action Plan Evaluation meeting with key agency stakeholders.

1.1.2. Evaluate the Heat Action Plan process based on performance and revise periodically.

1.1.3. Evaluate the impact and coverage of the heat action plan and revise accordingly.

1.1.4. Revised plan need to be highlighted on Government of Rajasthan website after 2017 Heat season for stakeholders.

Output Indicators 1.1

1.1.1 Number of evaluation meetings conducted after heat wave
1.1.2 Number of periodic meetings for heat action plan conducted

2. Block Chief Medical Officer (BCMO) / Chief Medical and health officer (CMHO) – Health Department

Strategy 2.1. Surveillance, Monitoring and Evaluation, Supportive Supervision

- **Activity 2.1**

2.1.1. Perform an epidemiological case investigation of heat related morbidities and mortalities during the heat wave season.

2.1.2. Collate the data from various sources, investigations regarding heat risk factors, illnesses and death based on daily average temperature. Measure the morbidity and mortality rates based on data before and after the plan implemented

2.1.3. Incorporate data findings in upcoming Heat Action Plans each year.

2.1.4. Continue supportive supervision to the medical officers in PHCs and CHCs and other health facilities.

- **Output Indicators 2.1**

2.1.1. Frequency of case investigations performed

2.1.2. Number of supportive supervision visits made in the block

Conclusion:

As Rajasthan is one of the major states often getting affected by Heat Waves, there is an immediate need to develop and implement such plans in other areas of the state. In addition, nodal department -DMRD and RSPCB, other line department- Health, Education, PHED; development partner UNICEF; academic and technical partner-IIPH-Gandhinagar indicated strong commitment for effective implementation of first Block Level Heat Action Plan for rural settings. On ground IIPH-Gandhinagar has made efforts to make it possible with support of all these stakeholders.

Framework for Block Programme Management Unit and Health professionals:

For primary health care level and block level health facilities, there is a need to make a framework for proper implementation of the preparedness and the quick response for early diagnosis and treatment. The framework indicates the linkage of heath care professionals with other departments involved. As Rapid Response teams consist of various government officials apart from medical officers, it's necessary to understand the framework.

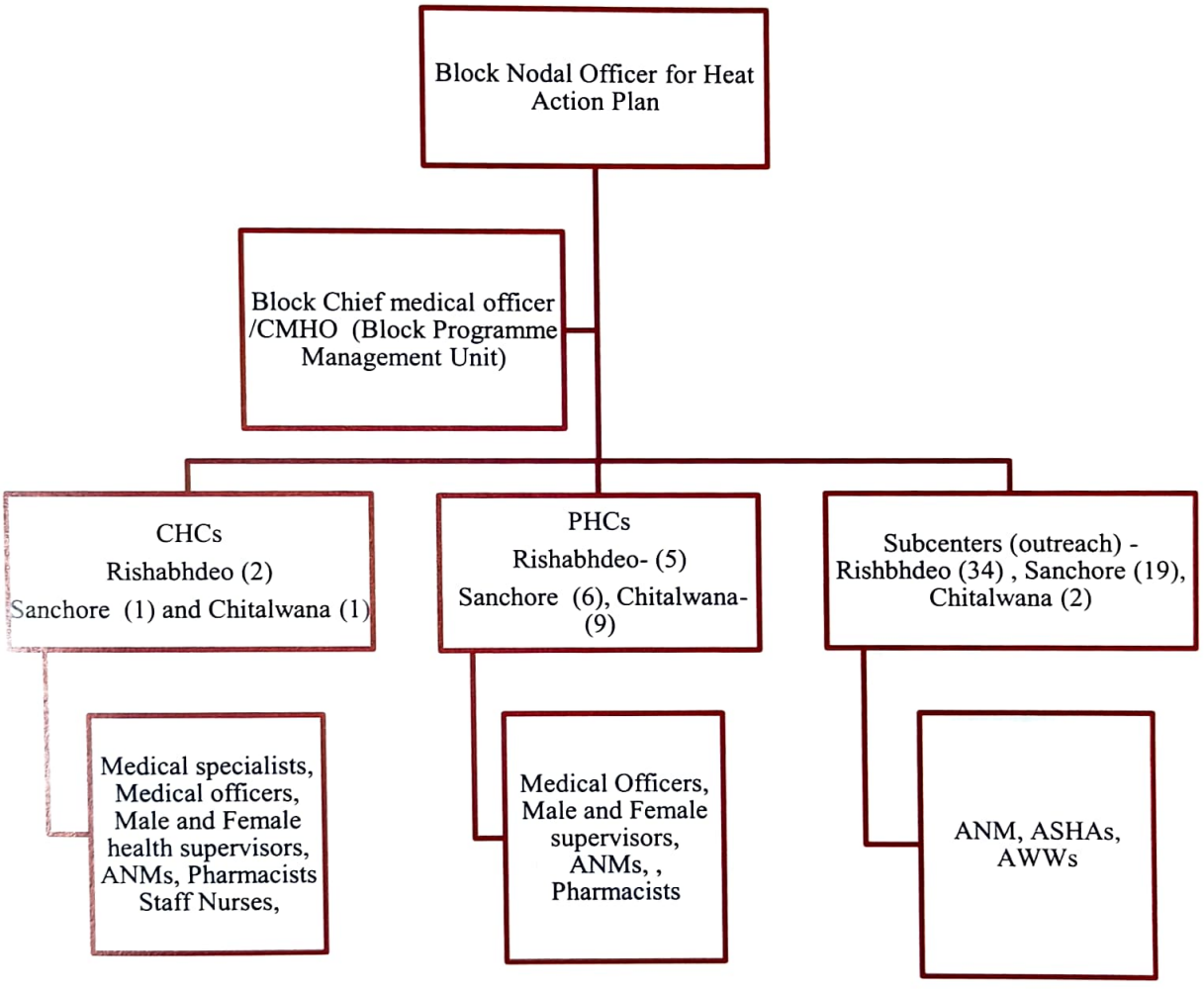


Figure 2 Framework for Block Programme Management unit and health professionals

Case Definitions of various Heat related illnesses:

Clinical Entity	Age Range	Setting	Cardinal Symptom	Cardinal Signs	Pertinent Negatives	Prognosis
Heat Rash	All,But frequently children	Hot environment; +/- insulating clothing or swaddling	Itchy Rash with small red bumps at pores in setting of heat exposure; bumps can sometimes be filled with clear or white fluid	Diffuse maculopapular rash, occasionally pustular, at hair follicles; pruritic	Not focally distributed like a contact dermatitis; not confluent patchy; not petechial hemorrhages	Full recovery with elimination of exposure and supportive care
Heat Cramps	All	Hot environment typically with exertion; +/- insulating clothing or swaddling	Painful spasms of large and frequently used muscle groups	Uncomfortable appearance may have difficulty fully extending affected limbs /joints	No contaminate wound/tetanus exposure; no seizure activity	Full recovery with elimination of exposure and supportive care
Heat Exhaustion	All	Hot environment; +/- exertion; +/- insulating clothing or swaddling	Feeling overheated, lightheaded, exhausted and weak, unsteady, nauseated, sweaty and thirsty, inability to continue activities	Sweaty/Diaphoretic; Flushed skin; hot skin; normal core temperature; +/- dazed, +/- generalized weakness, slight disorientation	No coincidental signs and symptoms of infection, no focal weakness, no aphasia, /dysarthria, no overdose history	Full recovery with elimination of exposureand supportive care; progression if continued exposure
Heat Syncope	Typically, adult	Hot environment; +/- exertion; +/- insulating clothing or swaddling	Feeling hot and weak; lightheadedness followed by brief loss of consciousness	Brief Generalized loss of consciousness in hot setting, short period of disorientation if any	No seizure activity, no loss of bowel or bladder continence, no focal weakness, no aphasia/dysarthria	Full recovery with elimination of exposure and supportive care, progression if continued exposure
Heat Stroke	All	Hot environment; +/- exertion; +/- insulating clothing or swaddling	Severe overheating, profound weakness, disorientation, obtundation, seizures or other altered mental status	Flushed dry skin (not always), core temperature ≥ 40-degree C, altered mental status with disorientation, possibly delirium, coma, seizures, tachycardia, +/- hypotension	No coincidental signs and symptoms of infection; no focal weakness; no aphasia/dysarthria, no overdose history	25-50% mortality even with aggressive care, significant morbidity if survive

Table 1 Case Definitions of Heat related illnesses

Heat illnesses –Treatment Protocol

Under the treatment protocol,for primary assessment, we need to consider the risk factors existing for the heat related illnesses as given in following chart:

Sr. No.	Risk factors for Heat Related Illnesses
1	Age < 15 years and > 65 years
2	Cognitive impairment
3	Heart and lung diseases
4	Limited access to air conditioning
5	Mental illness
6	Obesity
7	Physical disabilities
8	Poor fitness level
9	Sickle cell trait
10	Strenuous outdoor activity during the hottest day time hours
11	Urban residence or living on higher floors
12	Alcoholism
13	Uncontrolled diabetes
14	Medications contributing to heat related illness

Symptoms and First Aid for various Heat illnesses:

Heat illness	Symptoms	First Aid
Heat rash	Skin redness and pain, possible swelling, blisters, fever, headaches.	Take a shower using soap to remove oils that may block pores preventing the body from cooling naturally. If blisters occur, apply dry, sterile dressings and seek medical attention
Heat Cramps	Painful spasms usually in leg and abdominal muscles or extremities. Heavy sweating	Move to cool or shaded place. Apply firm pressure on cramping muscles or gently massage to relieve spasm. Give sips of water. If nausea occurs, discontinue.
Heat Exhaustion	Heavy sweating, weakness, Skin cold, pale, headache and clammy extremities. Weak pulse. Normal temperature possible. Fainting, vomiting.	Get victim to lie down in a cool place. Loosen clothing. Apply cool, wet cloth. Fan or move victim to air-conditioned place. Give sips of water slowly and if nausea occurs, discontinue. If vomiting occurs, seek immediate medical attention, call 108 and 102 for ambulance.
Heat Stroke (Sun Stroke)	High body temperature. Hot, dry skin. Rapid, strong pulse. Possible unconsciousness or altered mental status. Victim will likely not sweat.	Heat stroke is a severe medical emergency. Call 108 and 102 for ambulance for emergency medical services or take the victim to a Health center orhospital immediately. Delay can be fatal. Move victim to a cooler environment. Try a cool bath or sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. **DO NOT GIVE FLUIDS ORALLY if the person is not conscious.**

Clinical evaluation or differential diagnosis:

Mild heat illness: A rectal temperature is most reliable measurement as alternatives; oral, tympanic, axillary and skin temperature are less accurate. Core temperature and absence of central nervous system symptoms will help the diagnosis and treatment of heat related illnesses. In the absence of hyperthermia, presence of central nervous system symptoms suggests the investigation for differential diagnosis.

Heat Exhaustion: In the case of heat exhaustion, the skin may appear pale associated with tachycardia or hypotension. Headache, dizziness, nausea, vomiting as well as diarrhea and loss coordination may occur. Such patients are advised to be in supine position with elevation of legs. They are instructed to remove excess clothing and are moved in cool shaded environment. Oral fluids are recommended for rehydration. Vital signs should be monitored with the transport to emergency department if symptoms don't improve after 20-30 minutes of onset.

Heat Cramps: Exercise associated muscle cramps are more common during hot and humid environment and is characterized by dehydration, depletion of electrolytes, hyponatremia etc. The treatment includes rest, prolonged stretching of affected muscle groups and oral sodium intake. For severe conditions, intravenous Normal Saline may be very useful for more rapid relief for severe cramping.

Heat Stroke: Heat Stroke requires immediate diagnosis and early treatment. It is characterized by the elevation of core temperature associated with involvement of central nervous system disturbances. Rectal temperature is recommended to obtain as early as possible. Treatment regime includes stabilizing airway, breathing and circulation. Onsite cooling is preferred generally. Applying ice packs or wet towels to axillary, groin, head, neck region is alternative option. The combination of rapid fan movement and spraying moderate temperature mist of water tends to have effective evaporative and convective cooling. Intravenous hydration needs to be recommended to maintain renal blood flow. In rural areas, community settings, patients should be kept in cool shaded environment without excess clothing till ambulance reach. The curative action taken in this time may decide the degree of cell damage leading to organ failure. Prevention of stroke includes the identification of older population having chronic medical disease or physical disabilities, which lack access to air conditioning and providing them the cooler environment.

The clinical evaluation or differential diagnosis is given in the below chart:

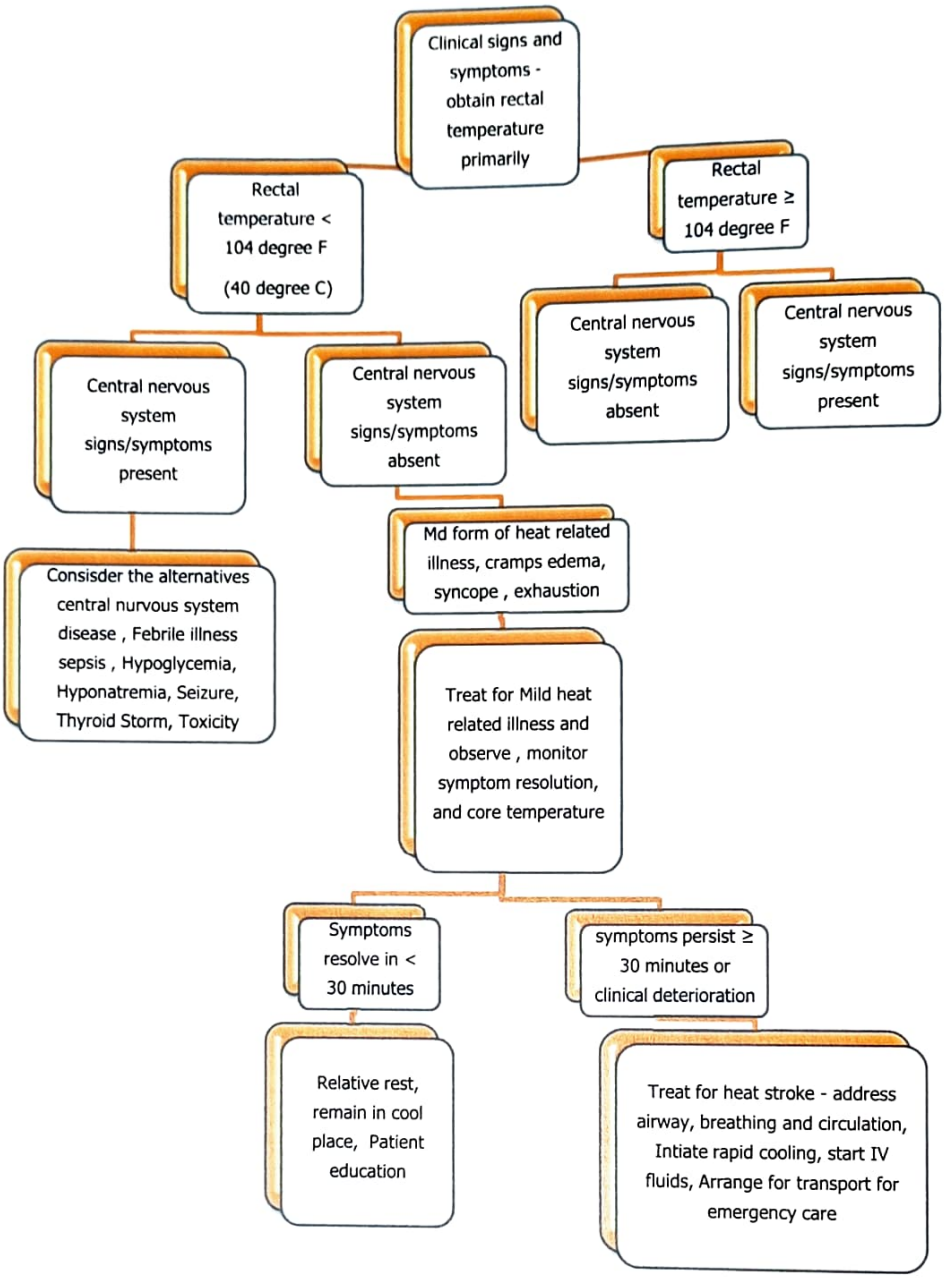


Figure 3 Algorithm for the initial evaluation of a patient with suspected heat related illness

Identification of Heat Wave illnesses and recordings of casualties:

It is important to undertake an objective identification of heat wave illnesses and systematically record causalities resulting from heat wave. States may form committees at the district level with members not below the rank of Assistant Civil Surgeon, Tahsildar, and Inspector of Police to enquire into the deaths due to heat strokes / heat waves for correct reporting. In order to do so, the following four factors need to be taken into account:

- Recorded maximum temperature during the particular time period and place.
- Recording incidents, *panchnama* or others witnesses, evidence or verbal – autopsy.
- Postmortem/medical checkup report with causes.
- Local authority or Local body enquiry/verification report.

Preparedness at community level -Dos and Don'ts Protocol

To minimize the impact of severe heat wave, certain preventive measures would be useful.

DO`S

1. Listen to radio; watch TV, read newspaper for local weather forecast to know if a heat wave is on a way.
2. Drink sufficient water and as often as possible, even if not thirsty
3. Wear light weight, light colored, loose and porous cotton clothes. Use protective goggles, umbrella/hat, shoes or chappals while going out in sun.
4. While travelling carry water with you
5. If you work outside, use a hat or an umbrella and also use a damp cloth on your head, neck, face and limbs.
6. Use ORS homemade drinks like Lassi, Torani (Rice water), lemon water, buttermilk etc. which help to rehydrate the body.
7. Recognize the signs of heat stroke, heat rash or heat cramps such as weakness, dizziness, headache, nausea, sweating and seizures. If you feel faint or ill, see a doctor immediately.
8. Keep animals in shade and give them plenty of water to drink.
9. Keep your home cool, use curtains, shutters or sunshade and open windows at night
10. Use fans, damp clothing and take bath in cold water frequently.
11. Provide cool drinking water near work place.
12. Caution workers to avoid direct sunlight.
13. Schedule strenuous jobs to cooler times of the day.
14. Increasing the frequency and length of rest breaks for outdoor activities
15. Pregnant workers and workers with medical condition should be given additional attention.

DONT'S

1. Do not leave children or pets in parked vehicle
2. Avoid getting out in the sun, especially between 12.00 pm to 3.00 pm.

3. Avoid wearing dark, heavy or tight clothing
4. Avoid strenuous activities when the outside temperature is high
5. Avoid cooking during peak hours. Open doors and windows to ventilate cooking area adequately.
6. Avoid alcohol, tea, coffee and carbonated soft drinks, which dehydrates the body.

Reasons for inadequate coping by community:

- Not knowing the issue of heat alerts
- Lack of awareness of precautionary measures (Dos and Don'ts)
- Not knowing symptoms of heat related illness and immediate treatment
- Lack of proper connectivity to primary health centers/Community health centers
- Lack of access to urgent medical attention at local levels (in villages)
- No access to shaded areas and cooling places
- Non-availability of adequate water
- Lack of knowledge of services available

The checklists for various coordinating agencies are given ahead to make them alert for heat wave preparedness and suggesting them actions need to be performed.

Agency action checklists

Checklist for Block Nodal Officer/SDM/BDO

Pre-summer:

- Designate heat health point of contact for each department.
- Re-engage the key agencies to facilitate and schedule monthly meetings.
- Educate the school children and capacitate teachers along with disseminating pamphlets about heat awareness.
- Create a village wise list of high risk areas for heat in the block
- Establish heat mortality tracking system and update datasets.
- Establish heat action web page on health department, Rajasthan website and update the action plan regularly.

During heat Season:

- Contact designated person of contact in each department announcing heat event at least five days in advance.
- Maintain communication with department designated person of contact for heat related updates.
- Ensure the availability of staff and supplies with each department including medical supplies, fresh drinking water etc.
- Communicate the locations of emergency health facilities and cooling centers/shaded areas/shelters with each department.
- Monitor heat alert and increase level when severe forecast occurs.

Post summer Evaluation:

- Review qualitative and quantitative data for process evaluations and updating of action plan.
- Conduct annual meeting of key agencies leaders and community partners.
- Update revised heat action plan online for stake holders.

Checklist for Public Health Managers

Pre- summer

- Identify high risk areas having vulnerable population
- Check inventories of medical and drug supplies in CHC/PHC
- Identify cooling centers/shaded locations and barriers for getting access to it.
- Ensure community involvement during awareness, capacity building and education.

During heat Season:

- Prepare Rapid Response Team (RRT) with the help of disaster management and relief department, Rajasthan officials.
- Distribute Dos and Don'ts protocol to the community.
- Ensure access to Medical Mobile Van in Red Zone and also ensure the availability of additional vans if required.
- Support and request to the people to not get panic effectively.

Post summer Evaluation:

- Participate in annual evaluation of heat action plan
- Review heat action plan and share the updated revised version.

Checklist for Community health centers (CHCs)/Primary health centers (PHCs) - Medical Officers and health workers:

Pre-summer:

- Distribute the pamphlets and other awareness material to the community
- Sensitize the health workers as well as community leaders
- Develop and execute the school health programmes at grass root level.
- Dissemination of awareness material among vulnerable communities in high focused villages.
- Coordinate the outreach efforts with other community groups, nonprofit organizations and higher education institutes.

During heat Season:

- Re check the medical and drug supplies and project extra indent to compensate the short fall timely.
- Modify the working hours of workers to avoid the heat stress.
- Ensure the visits to the pockets of vulnerable population for monitoring and active surveillance in villages
- Communicate the information at tertiary level and 108 ambulance services regarding the grass root issues to reduce the gap.

Post summer Evaluation:

- Participate in annual evaluation of heat action plan.
- Review the heat action plan and update the revised plan.

Checklist for 108 Emergency Services:

Pre- summer

- Prepare handouts about heat illnesses for paramedics.
- Create displays on ambulances to build public awareness during major heat events.
- Establish dynamic strategic deployment plan for ambulances
- Ensure adequate supply of IV fluids
- Identify high risk areas for heat.
- Prepare SMS messages to disseminate during emergencies.
- Identify media point of contact.

During heat Season:

- Recheck the medicine and drug stocks and make it ready for use
- Keep accurate records of pre- hospital care
- Send messages to all employees alerting them and inform them about heat action plan
- Activate dynamic strategic deployment plan
- Staff surplus employees and restrict leave.

Post summer Evaluation:

- Provide data to key agencies leaders
- Participate in annual evaluation of heat action plan.
- Review the heat action plan and update the revised plan.

Checklist for Press Officer at Block:

Pre-summer:

- Secure commercial airtime slots for public service announcements
- Identify areas to post warnings and information during heat season
- Organize trainings for health workers and medical professionals
- Activate telephone heat hotline
- Begin placing temperature forecasts in news papers
- Put banners and posters in public crowded areas of block.

During heat Season:

- Issue heat warnings in heat and electronic media
- Contact local Radio and TV stations for announcements
- Use SMS, texts and WhatsApp mobile messaging and centralized mobile databases to send alerts
- Contact Transport department to put hoardings and banners on public bus stops as well as on buses.

Post summer Evaluation:

- Evaluate the reach of advertising to targeted groups by other means of communication such as social media.
- Participate in annual evaluation of heat action plan.
- Review heat action plan and update the revised plan

Checklist for Education department officials at block (BEO/ABEO):

Pre- summer

- Capacity building of teachers regarding heat wave awareness and education
- Child friendly education trainings among students
- Distribution of heat awareness and protection material in local schools in rural areas.
- Education to community members, families.
- Encourage children to talk about the signs and symptoms of heat related illness
- Advocacy for holidays to school children during heat wave period

During heat Season:

- Awareness and knowledge dissemination in the schools
- Distribution of ice packs and cool water in schools

Post summer Evaluation:

- Participate in annual evaluation of heat action plan
- Review the plan and update revised plan.
- Strategies such as Behavioral change communication for long term outputs or an outcome is being adopted after heat wave.

Checklist for Disaster Management and Relief Department Officials at Block (BDO):

Pre-summer:

- Collection of data of vulnerable population and areas from various sources
- The mapping exercises of vulnerable population
- The Develop the preparedness and adaptation protocol and disseminate it.

During heat Season:

- Issue of high alerts with the communication with meteorology department and Issue heat warnings in print and electronic media.
- Place the various banners and posters at the public places with the help of department of public health engineering and department of transport.
- Advocate for keeping school closed involving education department
- Develop Rapid Response Team (RRT) with the help of medical and health professionals of Block programme management Unit, Health department.

Post summer Evaluation:

- Participate in annual evaluation of heat action plan
- Review the plan and update revised plan.
- Highlight on block specific interventions

Brief Profile of Stakeholders:

Government of Rajasthan

Government of Rajasthan is one of the premiere state governments taking innovative thinking into practice through various initiatives. The state governments have various departments including health department, Panchayati Raj department, Forest Department, Public Health Engineering Department etc. like other states. The problem statement is different from other state making Rajasthan to focus on some complex problems such as Climate change and health. The government has supported many excellent programmes and schemes.

Disaster Management and Relief Department, Government of Rajasthan

Relief Department came into existence vide state ordinance to establish the office of the Relief Commissioner. Till 1964, Food and Relief department were jointly working. After that, they get separated. Disaster Management and Relief department is the permanent department of the state administration functioning under the commissioner and secretary, Disaster Management and Relief Department. Head office is in Jaipur having no other offices or branches. District Collectors and district level officers of the department act as the technical controlling, coordinating officers in the districts. 'Rajasthan Rahat Kosh' is developed to help the poor and vulnerable population affected by disasters.

Rajasthan State Pollution Control Board (RSPCB), Government of Rajasthan

The Rajasthan state Pollution Control board was constituted under the section 4 of Water (Prevention and control of Pollution) Act, 1974, having objectives of prevention and control of water pollution and maintaining or restoring of wholesomeness of water. The prevention, control and abatement of Air pollution under the provisions of Air (Prevention and Control of Pollution) Act, 1981 made it have the objective of prevention of air pollution. Water (Prevention and control of Pollution) CESS Act, 1977 has been enacted to make state board financially independent. Under this act State is made to collect CESS on the basis of water consumed by the industries. Later, State board is engaged in implementation of the rules made under the environment (Protection) Act, 1986. Water pollution control and Air Pollution Control Rules are developed by the board and presented on the RSPCB website. Investors or industrialist need to take permission or clearance from this board to establish the company under all rules and regulations.

UNICEF, Rajasthan:

United Nations Children's Emergency Fund (UNICEF) is the international bilateral organization headquartered in 'New York 'working in the state of Rajasthan providing the technical support to the Government of Rajasthan for various programmes, improving child survival, growth and

development. It focuses on health, nutrition status of newborn, children, adolescents, women, water and sanitation issues, disaster risk reduction etc.

IIPH Gandhinagar

Indian Institute of Public health, Gandhinagar has been established as India's first public health university under Gujarat State Act 2015 with the support of the'Prime minister, Shri. Narendra Modi' The IIPHG is working in the area of Public Health, Health Policy, Environmental Health research and implementation. IIPHG implemented South Asia's first Heat Action Plan in Ahmadabad. On the basis of that, again IIPHG is designing this block level heat action plan for Rajasthan.

References

1. Sheffield P E, Landrigan P J.Global Climate Change and Children's health: Threats and Strategies for prevention. Environmental Health Perspectives 2011;119(3):291-297
2. Feeling the heat child survival in a changing climate. International Save the children alliance 2009; http://www.savethechildren.de/fileadmin/Dokumente_Download/Downloadbereich_200910_feelingtheheat.pdf(last (last accessed on March 24 2017)
3. Becker J A, Stewart L K. Heat Related Illness. American Family Physician 2011:83(11):1326-1330
4. Kareem Shaheen. The Guardian. Extreme heat waves could push Gulf climate beyond human endurance, study shows. Available from http://www.theguardian.com/environment/2015/jul/26/extreme-heatwaves-could-push-gulf-climate-beyond-human-endurance-study-shows (accessed on April 4, 2017)
5. Ground water Scenario Jalore District Rajasthan, Government of India, Ministry of Water Resources, Central Ground water Board, 2013. Available from http://www.cgwb.gov.in/District_Profile/Rajasthan/Jalore.pdf (accessed on March 21 2017).
6. Migrating Poverty in western Rajasthan-Baseline survey report, Sanchore. Center for microfinance 2010. Available from http://www.mpowerraj.gov.in/Documents/Baseline%20sanchore.pdf (accessed on April 7th 2017)
7. Deshmukhe G, Ramamoorthi K, Sen Gupta R. Impact of Heat waves over India. Current Science 2000;79(2)25:153-162
8. Indian Institute of Tropical meteorology, Indian Meteorological department, Ministry of Earth Sciences, Government of India http://www.tropmet.res.in/CCCR-102-Page (accessed on March 23, 2017)
9. Ahmadabad Heat Action Plan 2016: Guide to Extreme heat planning in Ahmadabad, India. Page 3
10. National Disaster Management Authority Guidelines, Government of India,2016,2017.
11. Wexler R K. Evaluation and Treatment of heat related illnesses.American

Family Physician 2002; 65(11):2307-2314.

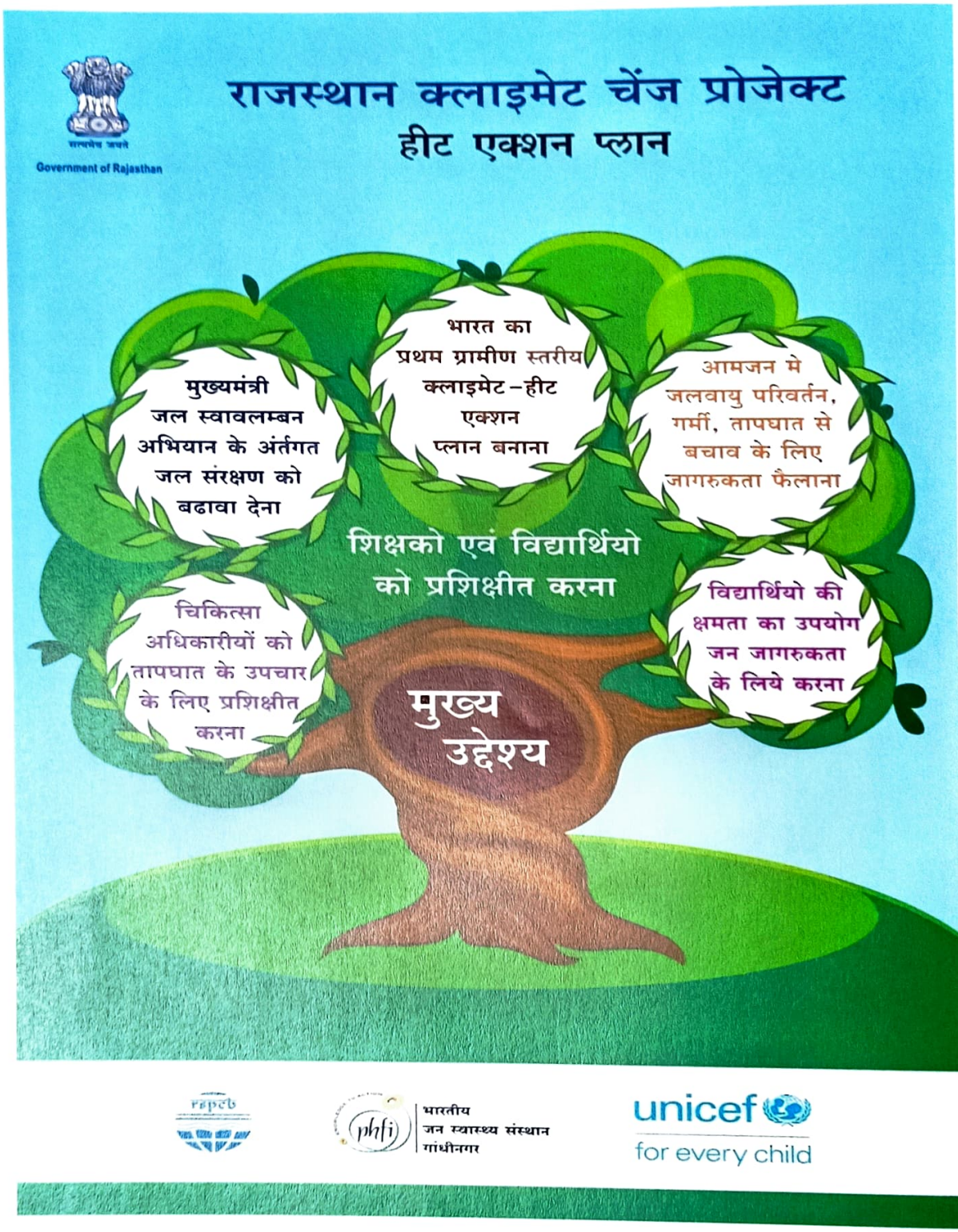
12. Meteorological Centre, Ahmedabad: http://www.imdahm.gov.in/# (click on About MC Tab) (last visited March 30, 2017). Terminologies and Glossary, India Meteorological Department: http://www.imd.gov.in/doc/termglossary.pdf.

Annexures of activities carried out under HAP

- Various IEC material in local language
- Capacity Building and Sensitization of Health Professionals
- Capacity Building of School Teachers and Awareness Activities in Schools
- Heat Awareness Day
- Media and Community Engagement

Annex A: Various IEC material in local language

A-1: Rajasthan Climate Change Project: Aims and Objectives Awareness



A-2: Community Awareness for Do's and Don'ts for prevention of heat related illnesses

A-3: Community Awareness for traditional, easily accessible methods for prevention of heat related illnesses

A-4: Awareness, sensitization and capacity building of ANM and ASHA for symptoms and management of heat related illnesses

A-5: Awareness, sensitization and capacity building of Medical Officers for symptoms and management of heat related illnesses

Government of Rajasthan

Rajasthan Climate Change Project
Heat Action Plan

TYPES OF HEAT RELATED ILLNESSES

Heat Rash : Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. Diffuse, pruritic, maculopapular or vesicular rash in the setting of heat exposure, often with insulating clothing or swaddling.

Heat Cramps : Heat cramps are the mildest form of heat illness and consist of painful muscle cramps and spasms that occur during or after intense exercise and sweating in high heat.

Heat Exhaustion : Heat exhaustion is more severe than heat cramps and results from a loss of water and salt in the body. It occurs in conditions of extreme heat and excessive sweating without adequate fluid and salt replacement. Heat exhaustion occurs when the body is unable to cool itself properly and, if left untreated, can progress to heat stroke.

Heat Syncope : Heat syncope is a fainting (syncope) episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

Heat Stroke : Heat stroke, the most severe form of heat illness, occurs when the body's heat-regulating system is overwhelmed by excessive heat. It is a life-threatening emergency and requires immediate medical attention.

SYMPTOMS AND TREATMENT OF HEAT-RELATED ILLNESSES:

Type of Heat-related Illness	Symptoms	First Aid and Treatment
Heat Rash	• Clusters of red bumps on skin • Often appears on neck, upper chest, folds of skin	When possible, a cooler, less humid work environment is best treatment. Keep rash area dry. Powder may be applied to increase comfort. Ointments and creams should not be used.
Heat Cramps	• Painful cramps, especially in the legs • Flushed	Move to a cool place and rest, remove excess clothing Place cool cloths on skin and fan skin. Give cool drinks containing salt and sugar. Stretch cramped muscles slowly and gently.
Heat Exhaustion	• Muscle cramps. Thirst, Pale, Moist skin • Usually fever over 100.4° F • Nausea, Vomiting, Diarrhea • Headache, Fatigue, Weakness • Anxiety, Dizziness, • Light headedness and faint feeling	Move to a cool place and rest, remove excess clothing Place cool cloths on skin and fan skin. Give cool drinks containing salt and sugar. If no improvement or unable to take fluids, take person to an emergency health department immediately. IV (intravenous) fluids may be needed.
Heat Syncope	• Fainting (Short duration) • Dizziness Light-headedness	Sit or lie down in a cool place. Slowly drink water, clear juice, or a cool drinks.
Heat Stroke	• High body temperature (above 104°F) • Hot, red, dry or moist skin • Rapid and strong pulse • Possible unconsciousness • Loss of appetite • Nausea, Vomiting • Headache, Fatigue, Confusion, • Agitation, Lethargy, Stupor, Seizures, • Coma, and death are possible	Move to a cool place and rest. Heat stroke is a life-threatening medical emergency and needs to be treated by a doctor. Remove excess clothing and drench skin with cool water. Place ice bags on the head, armpits and groin areas. Offer cool fluids if alert and able to drink. In Emergency Health Department Ice bath immersion, Evaporative cooling Monitor temperature and blood chemistries Initiate IV hydration, Neuroleptics for seizures Mannitol/diuretics if needed Stop cooling at rectal temperature of 100.4°F

RSPCB

phfi | भारतीय जन स्वास्थ्य संस्थान गांधीनगर

unicef for every child

A-6: Awareness generation in schools for prevention of heat related illnesses

Annex B: Capacity Building and Sensitization of Health Professionals

Annex C: Capacity Building of School Teachers and Awareness Activities in Schools

Annex D: Heat Awareness Day

India's first Heat Awareness Day, 5th May, 2017: Rishabhdeo block, Udaipur, Rajasthan

उदयपुर में बनेगा देश का प्रथम हीट एक्शन प्लान

पत्रिका न्यूज नेटवर्क
rajasthanpatrika.com

उदयपुर. जलवायु परिवर्तन एक वैश्विक मुद्दा है। यह मानव स्वास्थ्य को नकारात्मक रूप से प्रभावित करता है। इससे निपटने की ठोस नीति बनाने के लिए उदयपुर जिला एवं ऋषभदेव ब्लॉक का राजस्थान क्लाइमेट चेंज प्रोजेक्ट के लिए चयन किया गया है। यह देश का प्रथम जिला एवं ब्लॉक स्तरीय हीट एक्शन प्लान होगा। इस प्रोजेक्ट को आपदा प्रबंधन एवं राहत विभाग तथा राज्य प्रदूषण नियंत्रण मंडल के मार्गदर्शन में यूनिसेफ, राजस्थान एवं इंडियन इंस्टीट्यूट ऑफ पब्लिक हेल्थ-गांधीनगर क्रियान्वित करेंगे।

जिला कलक्टर रोहित गुप्ता की अध्यक्षता में हुई बैठक में इस प्रोजेक्ट के मुख्य अधिकारी डॉ. महावीर गोलेच्छा ने बताया कि इस प्रोजेक्ट का मुख्य उद्देश्य जलवायु परिवर्तन के नकारात्मक प्रभावों को समझ कर उसके लिए ठोस नीति बनाना, आमजन (विशेषकर बच्चों, माताओं एवं कमजोर वर्ग) में जलवायु परिवर्तन के लिए जागरूकता बढ़ाना है। इस प्रोजेक्ट के अन्तर्गत भारत का प्रथम जिला स्तरीय एवं ब्लॉक स्तरीय हीट एक्शन प्लान (अत्यंत गरम तापमान तथा लू) कार्यान्वित किया जाएगा। इसके अन्तर्गत अत्यधिक गर्मी के कारण होने वाले बीमारियों के उपचार के लिए चिकित्सा अधिकारियों का प्रशिक्षण दिया जाएगा। स्वास्थ्य केंद्रों पर विभिन्न मार्गदर्शिका, जागरूकता सामग्री प्रदर्शित की जाएगी। डॉ. गोलेच्छा ने बताया कि इंडियन इंस्टीट्यूट ऑफ पब्लिक हेल्थ-गांधी नगर क्लाइमेट चेंज के क्षेत्र में डॉ. दिलीप मावलंकर एवं डॉ.पार्था गांगुली के मार्गदर्शन में कई वर्षों से कार्य कर रहा है। बैठक में अतिरिक्त जिला कलक्टर सीआर देवासी, स्वास्थ्य विभाग एवं शिक्षा विभाग के अधिकारियों ने भाग लिया।

मौसमी परिवर्तन से होने वाली बीमारियों पर होगा काम

जालोर व सांचौर में होगा यूनिसेफ के साथ मौसम के बदलाव से होने वाली बीमारियों पर शोध

यूनिसेफ व राजस्थान तथा गुजरात के इंस्टीटयूट का ज्वाइंट प्रोजेक्ट

जिला व ब्लॉक स्तर पर बनेगा हीट एक्शन प्लान

इस प्रोजेक्ट के तहत जिला व ब्लाक स्तरीय हीट एक्शन प्लान बनाया जाएगा। जिसमें विशेष रूप से लू व गर्मियों से होने वाली बीमारियों के नियंत्रण पर कार्य होगा। इसके साथ ही गर्मी में होने वाली बीमारियों के बचाव के लिए चिकित्सकों की टीम का चयन कर उन्हें प्रशिक्षण भी दिया जाएगा।

पत्रिका न्यूज नेटवर्क | जालोर

जिले में गर्मियों समेत अन्य मौसम के साथ होने वाले बदलाव के दौरान फैलने वाली बीमारियों की रोकथाम के लिए राजस्थान क्लाइमेट चेंज प्रोजेक्ट के तहत जालोर समेत सांचौर ब्लॉक का चयन किया गया है। इसको लेकर शुक्रवार को कलेक्टर अनिल गुप्ता की अध्यक्षता में बैठक का भी आयोजन किया गया। जानकारी के अनुसार राज्य में आपदा प्रबंधन एवं राहत विभाग तथा राजस्थान प्रदूषण नियंत्रण मंडल के निर्देश पर जालोर व सांचौर ब्लाक का चयन राज्य सरकार की ओर से किया गया है। जिसमें यूनिसेफ व राजस्थान एवं इंडियन इंस्टीट्यूट ऑफ पब्लिक गांधीनगर, गुजरात की ओर से इस पूरे प्रोजेक्ट पर काम किया जाएगा। जिसमें मौसम के अचानक परिवर्तन होने के साथ बढ़ने वाली बीमारियों के नियंत्रण पर काम होगा। इसको लेकर आयोजित बैठक में यूनिसेफ के डॉ. दिलीप मांगलवकर एवं डॉ. पार्थ गांगुली ने इस पूरे प्रोजेक्ट के बारे में जानकारी दी। इस अवसर पर एडीएम पीएस नगर और सीएमएचओ डॉ. जीएस देवल समेत कई अधिकारी मौजूद थे। शेष पेज 15

पत्रिका Fri, 14 April 2017 epaper.patrika.com//

गर्मी से राहत दिलाने उदयपुर में पहला हीट एक्शन प्लान बनेगा

• जलवायु परिवर्तन की नीतियां बनाने उदयपुर और ऋषभदेव ब्लॉक का चयन

सिटी रिपोर्टर | उदयपुर

जलवायु परिवर्तन की ठोस नीति बनाने और जलवायु परिवर्तन की समस्या से निपटने के लिए उदयपुर जिला और ऋषभदेव ब्लॉक का चयन राजस्थान क्लाइमेट चेंज प्रोजेक्ट के लिए किया गया है। यह प्रोजेक्ट आपदा प्रबंधन और राहत विभाग व राजस्थान राज्य प्रदूषण नियंत्रण मंडल, राजस्थान सरकार के मार्गदर्शन में यूनिसेफ, राजस्थान एवं इंडियन इंस्टिट्यूट ऑफ पब्लिक हेल्थ-गांधीनगर की ओर से होगा। कलेक्टर रोहित गुप्ता की अध्यक्षता में हुई बैठक में प्रोजेक्ट के मुख्य अधिकारी डॉ. महावीर गोलेच्छा ने बताया कि प्रोजेक्ट का मुख्य उद्देश्य जलवायु परिवर्तन के नकारात्मक प्रभावों को समझकर उसके लिए ठोस नीति बनाने, आमजन (विशेषकर बच्चों, माताओं एवं कमजोर वर्ग) में जलवायु परिवर्तन के लिए जागरूकता बढ़ाना रहा। प्रोजेक्ट के तहत भारत का प्रथम जिला स्तरीय एवं ब्लॉक स्तरीय हीट एक्शन प्लान (अत्यंत गरम तापमान और लू) कार्यान्वित किया जाएगा। इसके अंतर्गत अत्यधिक गर्मी के कारण होने वाले बीमारियों के इलाज के लिए चिकित्सा अधिकारियों को प्रशिक्षण दिया जाएगा। स्वास्थ्य केंद्रों पर विभिन्न मार्गदर्शिका, जागरूकता सामग्री प्रदर्शित की जाएगी। डॉ. गोलेच्छा ने बताया कि इंडियन इंस्टिट्यूट ऑफ पब्लिक हेल्थ-गांधी नगर क्लाइमेट चेंज के क्षेत्र में डॉ. दिलीप मावलंकर और डॉ.पार्थ गांगुली के मार्गदर्शन में कई वर्षों से कार्य कर रहा है। उनके मार्गदर्शन में उदयपुर जिले और ऋषभदेव ब्लॉक में भी यह प्रोजेक्ट जिला प्रशासन के सहयोग से क्रियान्वित किया जाएगा। बैठक में अतिरिक्त जिला कलक्टर सीआर देवासी, स्वास्थ्य विभाग एवं शिक्षा विभाग के अधिकारियों ने भाग लिया।

सांचौर एवं चितलवाना में देश का प्रथम ब्लॉक स्तरीय हीट एक्शन प्लान

भास्कर न्यूज | जोधपुर

राजस्थान भास्कर व भूमिगत मध्य लोगों को गर्मी की लहर से बचाने के लिए प्रदेश के सांचौर व चितलवाना ब्लॉक में हीट एक्शन प्लान का आयोजन कर जानकारी देगी। जानकारी के अनुसार जलेर जिस जलवायु परिवर्तन को लेकर काफी प्रभावित रहा।

जलवायु परिवर्तन मानव स्वास्थ्य को नकारात्मक रूप से प्रभावित करता है। इसके लिए लोग नीति बनाने एवं जलवायु परिवर्तन की समस्या से निपटने को लेकर सांचौर एवं चितलवाना ब्लॉक का चयन राजस्थान क्लाइमेट चेंज प्रोजेक्ट के लिए किया गया है। प्रोजेक्ट अपर प्रधान एवं राज्य मिशन तथा राजस्थान राज्य प्रदूषण नियंत्रण मंडल, राजस्थान भास्कर के मार्गदर्शन में यूनिसेफ, राजस्थान एवं इंडियन इंस्टिट्यूट ऑफ पब्लिक हेल्थ-गांधीनगर द्वारा क्रियान्वित किया जाएगा। इस प्रोजेक्ट के मुख्य अधिकारी डॉ महावीर गोलेच्छा ने बैठक लेकर बताया की इस प्रोजेक्ट का मुख्य उद्देश्य जलवायु परिवर्तन के नकारात्मक प्रभावों को समझकर उसके लिए ठोस नीति बनना होगा। आमजन में जलवायु परिवर्तन को लेकर जागरूकता बढ़ाने के लिए इस प्रोजेक्ट के अन्तर्गत भारत का प्रथम ब्लॉक स्तरीय हीट एक्शन प्लान क्रियान्वित किया जाएगा। इसके अन्तर्गत अत्यधिक गर्मी के कारण होने वाली बीमारियों के उपचार के लिए चिकित्सा अधिकारियों का प्रशिक्षण किया जाएगा एवं स्वास्थ्य केन्द्रों पर विभिन्न मार्गदर्शिका, जागरूकता सामग्री प्रदर्शित की जाएगी। वहीं उन्होंने बताया कि इंडियन इंस्टिट्यूट ऑफपब्लिक हेल्थ गांधीनगर क्लाइमेट चेंज के क्षेत्र में डॉ दिलीप मावलंकर एवं डॉ पार्था गांगुली के मार्गदर्शन में कई वर्षों से कार्य कर रहा है। तथा उनके मार्गदर्शन में सांचोर व चितलवाना ब्लॉक में भी यह प्रोजेक्ट जिला प्रशासन के सहयोग से क्रियान्वित किया जायेगा। बैठक में तहसीलदार पिताम्बर दास राठी, ब्लॉक चिकित्सा अधिकारी विभाराम चौधरी, चितलवाना चिकित्सा अधिकारी पी आर बाँम, अतिरिक्त ब्लॉक शिक्षा अधिकारी डॉ धनश्याम वैष्णव, कांतिलाल दुर्गेश, वीरेमिंह राठौड़, जगदीश देवासी सहित मौजूद थे।

सांचौर. हीट एक्शन प्लान के बारे में स्थानीय रिपोर्टरों को जानकारी देते डॉ. गोलेच्छा।

यह होगा हीट एक्शन प्लान

एप्लान के कैटल मैरगन परिवर्तन के नकारात्मक प्रभावों के कारण अधिक आयु के कैटल लोगों को उल्टी, दस्त सहित कई प्रकार की बीमारियों का शिकार होना पड़ जाता है। जिसको लेकर इन दोनों ब्लॉकों में टीम द्वारा बच्चों सहित लोगों को जानकारी देकर उनके लक्षण व बचाव के बारे में जानकारी देंगे। वहीं इनको लेकर सांचौर व चितलवाना में प्रचार - प्रसार किया जायेगा। इनका प्रभाव दिखने के बाद यूनिसेफ संस्था द्वारा प्रोजेक्ट भर में यह कार्यक्रम का आयोजन करेगी। वहीं इनको लेकर शिविर स्वास्थ्य केन्द्र, उप स्वास्थ्य केन्द्र, पीएचसी केन्द्रों पर शिविर का आयोजन किया जाएगा। वहीं शिविर को लेकर आशा सहा के कैटल स्थानीय डॉक्टरों को प्रशिक्षण दिया जाएगा। जलेर सहित 3 जिलों में होगा जलवायु परिवर्तन से होने वाली हानी से बचने के लिए सर्वप्रथम राजस्थान के 3 जिलों में प्रोजेक्ट का आयोजन किया जाएगा। जिसमें जालोर, उदयपुर व जयपुर है। वहीं जलेर में सांचौर व चितलवाना तहसील, उदयपुर में झाडोल व जयपुर सिटी में आयोजित कर लोगों में प्रचार - प्रसार किया जायेगा। वहीं इस प्रोजेक्ट को प्रथम बार भारत स्वरूप व यूनिसेफ संस्था के तत्वाधान में 2012 के कैटल अम्मदाबाद में आयोजित किया गया। वहीं अहमदाबाद में 2010 के कैटल जलवायु परिवर्तन की बैठकों करीबन 350 लोगों की मौत होने के बाद प्रशिक्षण किया गया था।

> जलवायु परिवर्तन की बीमारियों के बारे में लोगों को सतर्क करने को लेकर जलेर के सांचौर व चितलवाना तहसील का चयन किया गया है। जिसमें ब्लॉक स्तर के कैटल स्थानीय चिकित्सों को ट्रेनिंग व प्रचार - प्रसार किया जाएगा। जिससे बचने के उपाय के बारे में बताया जाएगा।
> - डॉ. महावीर गोलेच्छा प्रोजेक्ट मुख्य अधिकारी।

पहले लू-तापघात जागरूकता दिवस की तैयारी

ऋषभदेव में होगा वृहद आयोजन

उदयपुर. राजस्थान क्लाइमेट चेंज प्रोजेक्ट के अन्तर्गत जिले के ऋषभदेव ब्लॉक में भारत का प्रथम लू-तापघात जागरूकता दिवस मनाया जाएगा। इसके माध्यम से ऋषभदेव के स्कूली छात्र आमजन में लू-तापघात के बचाव के उपायों, लक्षणों एवं प्राथमिक उपचार के लिए जागरूकता बढ़ने के लिए रैली निकालेंगे। प्रोजेक्ट के मुख्य अधिकारी डॉ. महावीर गोलेच्छा से बताया कि जलवायु परिवर्तन के कारण तापमान बहुत बढ़ रहा है, जिसके फलस्वरूप लू-तापघात से संबन्धित रोग भी बढ़ रहे हैं। लू-तापघात का उपचार समय पर न हो तो यह जानलेवा हो सकता है। लोगों में जागरूकता को बढ़ाना ही राजस्थान क्लाइमेट चेन्ज प्रोजेक्ट का मुख्य उद्देश्य भी है। भारत में पहली बार इस प्रकार का आयोजन होगा। जिला कलक्टर ने आमजन से इस आयोजन में अधिकाधिक भागीदारी निभाने का आह्वान किया है। आयोजन राजस्थान क्लाइमेट चेन्ज प्रोजेक्ट आपदा प्रबन्धन एवं सहायता विभाग, राजस्थान प्रदूषण नियंत्रण बोर्ड, यूनिसेफ, राजस्थान एवं भारतीय जनस्वास्थ्य संस्थान गांधीनगर की ओर से जिला प्रशासन के सहयोग से किया जा रहा है।

पत्रिका Thu, 04 May 2017
epaper.patrika.com//c/192

लू से बचाव के लिए किया जागरूक

सांचौर. राजस्थान क्लाइमेट चेंज प्रोजेक्ट के तहत क्षेत्र की कई स्कूलों में शनिवार को बच्चों को हीट एक्शन प्लान के बारे में जानकारी दी गई। इस दौरान अरणाय, धानता, कारोला व माखुपुरा स्थित उच्च माध्यमिक-उच्च प्राथमिक विद्यालय के बच्चों को प्रोजेक्ट के मुख्य अधिकारी क्लाइमेट चेंज विशेषज्ञ डॉ. महावीर गोलेच्छा और उपखंड कार्यालय स्तर से नवीनकुमार बंसल ने गर्मी के मौसम में लू-तापघात से शरीर पर पड़ने वाले दुष्प्रभाव के बारे में बताया। उन्होंने गर्मी मे स्वस्थ रहने के लिए पानी अधिक पीने, ज्यादा गर्मी में घर से बाहर न निकले, सफेद या हल्के रंग के कपड़े पहनने, बुजुर्गों व बच्चों का विशेष ध्यान रखने, ठण्डे पेय पदार्थों का उपयोग करने, छायादार व ठण्डे स्थानों पर विश्राम करने, बाहर निकलते समय मुंह व शरीर को कपड़े से ढककर रखने, कच्ची कैरी का सेवन करने सहित अन्य महत्वपूर्ण जानकारी देने के साथ ही लू-तापघात के लक्षणों और इसके प्राथमिक उपचार के बारे बताया।

इस मौके धानता में प्रधानाचार्य यादराम यादव, अरणाय में गंगासिंह चौहान, कारोला में प्रवीण पण्ड्या व माखुपुरा में भूराराम सहित विद्यार्थी मौजूद थे।

विद्यार्थियों को लू से बचने के बारे में जानकारी दी

सांचौर | राजस्थान क्लाइमेंट चेंज प्रोजेक्ट ने सरकार की ओर से संचालित भारत का प्रथम लू तापघात के संबंधी जागरूकता कार्यक्रम हीट एक्शन प्लान की जानकारी क्षेत्र के अरणाय, धानता, कारीला व माखुपुरा स्थित विभिन्न विद्यालयों का दौरा कर दी गई। इस दौरान प्रोजेक्ट के मुख्य अधिकारी व क्लाइमेंट चेंज विशेषज्ञ डॉ. महावीर गुलेच्छा ने विद्यालयों के बच्चों को हीट एक्शन प्लान की जानकारी देते हुए बताया कि गर्मी के मौसम में बढ़ते वातावरणीय तापमान का हमारे शरीर पर अनेक प्रकार से प्रभाव पड़ता है। गर्मी के मौसम में हमें स्वस्थ रहने के लिए खूब पानी पीना, अधिक गर्मी में घर से बाहर न निकलना, सफेद या हल्के रंग के कपड़े पहनना, बुजुर्गों व बच्चों का विशेष ध्यान रखना, ठंडे पेय पदार्थों का उपयोग करना, ठंडे स्थानों पर विश्राम करना, बाहर निकलते समय मुंह व शरीर को ढककर रखना, लू के लक्षणों तथा प्राथमिक उपचार के बारे में जानकारी दी। उपखंड कार्यालय स्तर से नवीन कुमार बंसल ने भी विद्यार्थियों को जानकारी दी।

पत्रिका Sun, 07 May 2017
epaper.patrika.com//c/

जालोर के सांचौर-चितलवाना का हीट एक्शन प्लान शुरू

जिला कलक्टर ने किया बैनर का विमोचन

भास्कर न्यूज | जालोर

राजस्थान क्लाइमेट चेंज प्रोजेक्ट के अतर्गत जलवायु परिवर्तन एवं तेज गर्मी के कारण होने वाले बीमारियों को रोकने तथा आमजन में इसके प्रति जागरूकता लोन के लिए हीट एक्शन प्लान जालोर जिले में शुरू किया गया। कलेक्टर अनिल गुप्ता की उपस्थिति में प्रोजेक्ट के मुख्य अधिकारी डॉ. महावीर गोलेच्छा ने हीट एक्शन प्लान की जानकारी दी। सोमवार को जिला परिषद के सभागार में हुई बैठक में कलेक्टर गुप्ता ने सीएमएचओ डॉ. जीएस दैवल व अन्य अधिकारियों की उपस्थिति में जन जागरूकता बैनर का विमोचन किया। उन्होंने बताया की प्रथम चरण में यह प्लान जिले के सांचौर एवं चितलवाना ब्लॉक में क्रियांवित होगा तथा इससे अत्यधिक गर्मी से होने वाली बीमारियों में कमी होगी। यह प्रोजेक्ट आपदा प्रबंधन एवं राहत विभाग तथा राजस्थान राज्य प्रदूषण नियंत्रण मंडल के मार्गदर्शन में यूनिसेफ, राजस्थान एवं इंडियन इंस्टिट्यूट ऑफ पब्लिक हेल्थ-गांधीनगर (गुजरात) द्वारा क्रियांवित किया जाएगा। शेष पेज 15

Technical Secretariat
Indian Institute of Public Health Gandhinagar
(University established under IIPHG ACT 2015, of Gujarat state)
Opp. Air Force Head Quarters, Near Lekawada Bus Stop,
Gandhinagar-Chiloda Road, Lekawada,
CRPF P.O, Gandhinagar -382042
Telephone: 079-66740700-799
Email : contact@iiphg.org

UNICEF Rajasthan
B-9, Bhawani Singh Rd, Durgadas Colony,
C Scheme, Ashok Nagar, Jaipur, Rajasthan 302001