



Ministry of Health and Family Welfare
Government of India

State Action Plan on Climate Change and Human Health

Mizoram



Version 2



National Centre
for Disease Control
Government of India



National Programme
on Climate Change
and Human Health

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PART 1: Climate Change and Its Health Impacts in Mizoram

INTRODUCTION:

Climate change is defined as: “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate vulnerability observed over comparable time periods.” It affects social and environmental determinants of health like- clean air, safe drinking water, sufficient food and secure shelter.

Climate change may negatively affect human health through a number of ways, but the commonly experienced are increased frequency and intensity of heat waves leading to rise in heat related illnesses and deaths, increased precipitation, droughts and desertification costing lives directly. High temperature is known to increase the level of ‘ground level ozone’ and other ‘climate altering pollutants’ other than carbon dioxide, which further exacerbate cardio-respiratory and allergic diseases and certain cancers. Besides these, there is increase in transmission and spread of infectious diseases, changes in the distribution of water-borne, food borne and vector-borne diseases and effects on the risk of disasters and malnutrition.

The United Nations Framework Convention on Climate Change (UNFCCC) Came into force on 21st March, 1994. Since then, many steps were initiated to reduce the effect of climate change at meetings like “Rio Convention 1992”, “Kyoto Protocol 1997”, ‘Male Declaration 1998’, ‘Convention of Parties’, ‘Cancun Agreement 2011’, “Durban Platform 2011”, “Nationally Determined Contributions” (NDCs) at Conference of Parties 21”.

India is a signatory to “Male’ Declaration” wherein health sector has to be strengthened so as to make it climate resilient. According to Male’ Declaration, it is desired that health-care facilities should be prepared & climate=resilient, particularly in prompting to encourage that these are able to withstand any climatic event, and that essential services such as water, sanitation, waste management and electricity are functional during such events. Further, for climate resilient, the health department has to undertake measures to initiate the greening of the health sector by adopting environment-friendly technologies, and using energy-efficient services.

MoEFCC has developed National Action Plan on Climate Change with eight missions. Later on, four new missions (including Health Mission) were identified. The Health Mission aims to reduce climate sensitive illnesses through integration with other missions under National Action Plan on Climate Change (NAPCC) as well as through programmes run by various ministries. As a follow up action, Ministry of Health and Family Welfare (MoHFW) constituted a National Expert Group on Climate Change & Health (NEGCH) to prepare National Action Plan on Climate Change and Human Health (NAPCCH) and recommend strategies for indicators, mitigation, capacity building etc.

National Centre for Disease Control (NCDC) is identified as the ‘technical nodal agency’ by MoHFW for the proposed National Health Mission on Health. The Centre for Environmental and Occupational Health Climate Change & Health (CEO&HH), NCDC, Delhi, conducted four regional consultations aimed at sensitizing states and Union Territories of the country. Regional consultations aimed at sensitizing states and Union Territories on reassessment of diseases’

morbidity and mortality with respect to climate variability and extremes have been conducted. These regional consultations had participations from ministries and department of states and UTs including Senior Regional Directors, Regional Directors from Regional Office of Health & Family Welfare, State Nodal Officers, State Surveillance Officers, National Vector Borne Disease Control Programme ,Officers from Integrated Disease Control Programme, representatives from identified Centre of Excellence, representatives from Regional Centre of Meteorological Departments, Ministry of Environment Forest and Climate Change and Central Ground Water Board.

Mitigation and adaption measures adopted in Mizoram against impact of climate change on human health:

State Action Plan on Climate Change

The State Action Plan on Climate Change (SAPCC) for Mizoram was formulated in 2013, and since then the state has implemented several sectoral projects. The second phase of State Action Plan on Climate Change contains the stock-taking of the proposed activities listed in the first phase along with the redefined actions based on the issue faced by the sector, gaps and new policies initiatives. The activities in the second State Action Plan have been carefully designed in light of Nationally Determined Contribution (NDC) and Sustainable Development Goals (SDG).

Mizoram State Action Plan on Climate Change and Human Health

The Department of Health & Family Welfare has come up with an action plan to create a climate resilient health system. The goal of a climate resilient health system to have a health system in place that not only withstands the onslaughts of climate variability but also sustains human health in the midst of uncertainties. This action plan draws heavily from the World Health Organization Operational Framework for building climate resilient health systems (WHO 2016) and the Ministry of Health & Family Welfare, Government of India's draft National Action Plan on Climate Change & Human Health (MOHFW 2016).

State Mission for Health

Mizoram is undertaking initiatives in building a healthy society by making medical facilities available and reachable to the people and also by focusing on preventive health care.

Major Achievements

Reduction in Malaria Outbreak

- The state has work effectively towards handling the malaria crisis of the state.
- Total number of Malaria cases (Pv & Pf) in 2016 was 7583 (71.28% reduction from 2015)
- 57.14%reduction in deaths as compared to 2016.
- Fogging and source reduction of Dengue has been done at outbreak localities.

Health Infrastructure Development

- The state has shown some significant improvement in public health infrastructure development.
- 7 new sentinel site hospitals have been identified in 7 districts of Mizoram.

- New entomological unit has been set up in the state headquarter for surveillance, research-based studies, sensitivity testing, etc.

Capacity building and trainings

- Capacity Building- Trainings of Medical Officer on dengue treatment and diagnosis have been conducted.
- Several workshops on climate change have been organized by Mizoram.

State Mission on Strategic Knowledge for Climate Change

The main objective of the ‘State Mission on Strategic Knowledge’ is knowledge generation. This is achieved by identification of knowledge gaps and bridging up those knowledge gaps.

Major Achievements

Development of Knowledge Management on Climate change and facilitating its operation

- Collection and compilation of Meteorological data on a regular basis.
- District wise assessment of vulnerability due to climate change was done on water resources, human health, socio-economic and bio-physical sectors.
- Published booklet ‘Meteorological data of Mizoram’ and ‘Climate Profile of Mizoram’
- A leaflet ‘Climate (sik leh sa) leh Mizoram’ was prepared for awareness material.
- Brochure – Mizoram Climate Change Cell was prepared.

Capacity Building on Climate Change

- MoU has been signed with Administrative Training Institute, GoM for institutionalizing capacity building on climate change adaptation planning in service departments.
- Capacity building workshops and training for government officials, line departments, NGOs, academicians and research scholars, journalist.
- Sensitization workshop on climate change was organized in 7 district colleges of the state.

State Water Mission

Mizoram is endowed with enough amount of fresh water in the form of perennial rivers and springs to meet the present demand. However, ensuring availability of drinking water in terms of adequacy and quality on sustainable basis is one of the major challenges.

Major Achievements

Finalization of plan for conservation and preservation of water resources

- MoU has been signed with the Young Mizo Association to work towards preservation of existing water resources and to take up various measures to increase the water resources.

Formulation of State Water Policy

- The Irrigation & Water Resources Department has initiate formulation of ‘State Water Policy’ which is facilitated by GIZ CCA NER. A task force comprising of all the

stakeholder departments has been constituted by the government for formulation of Mizoram State Water Policy. The draft has been already prepared.

Renovation and development of traditional water harvesting system with scientific intervention in district level

- Rain water harvesting schemes are taken up in places where piped water supply schemes are not feasible. Various public buildings as well as individual households have taken up the rain water harvesting schemes for an alternative source of water supply.

State Mission for Energy (Enhanced Energy Efficiency & State Solar Mission)

Major Achievement (Energy efficiency)

- Renovation and modernization of 132 kv substation at Bukpui
- Augmentation/upgradation of distribution network in Lawngtlai and Champhai district.
- DELP Programme & LED village programme (Demonstration programme)- 180 consumers across Muthi village.
- Construction of 4MW Kawlben SHP, 5MW Tlawva SHP, Tuiriza SHP & Tuizing SHP with cumulative capacity of 9.20MW is in progress.

Major Achievement (Solar Mission)

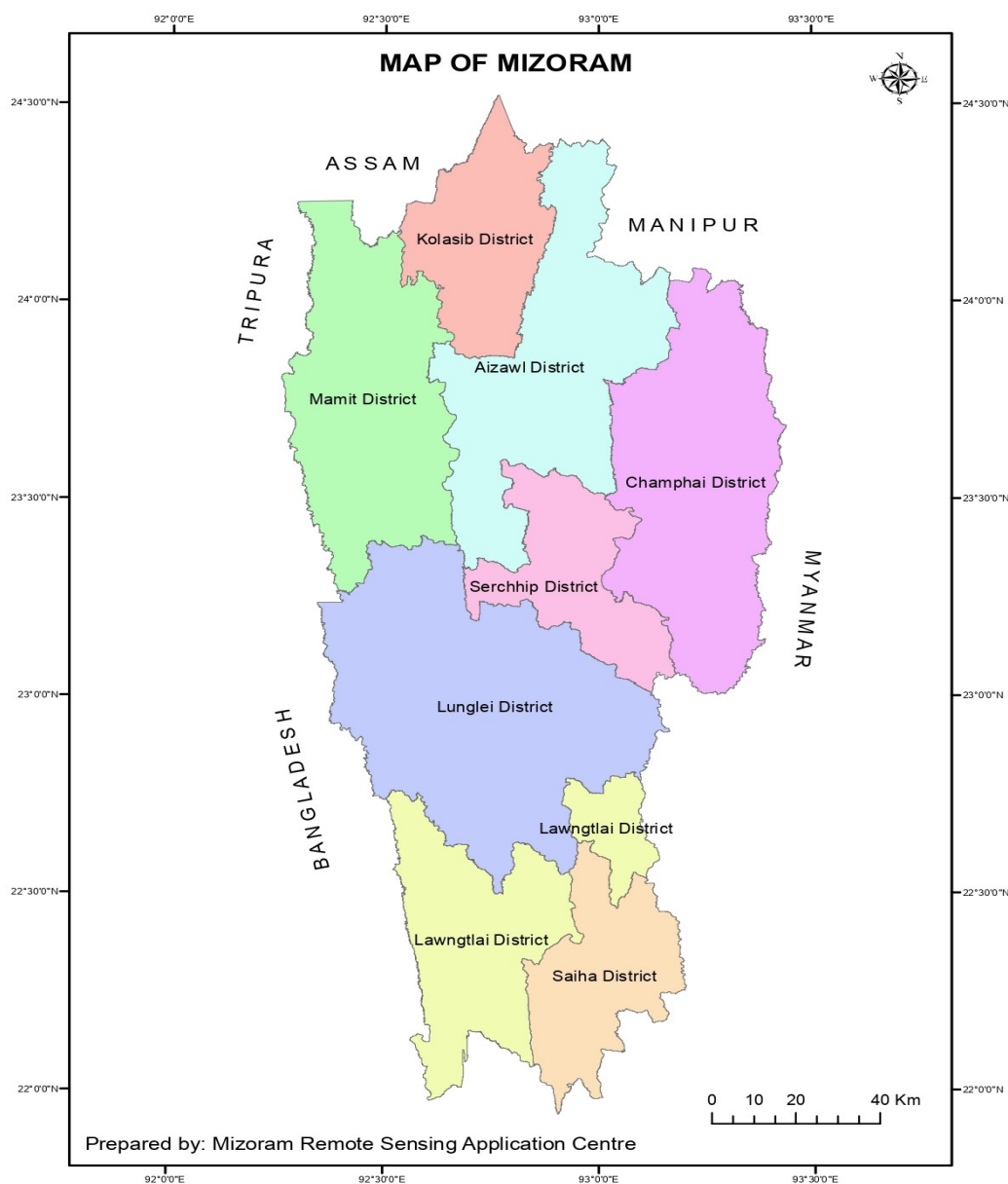
- ZEDA, Govt. of Mizoram has promoted solar power packs to address the lack of access/un reliable access to electricity in rural areas. The standalone system disseminated includes 83 number of 500 W system and 6,176 number of 100 Wp system
- ZEDA has facilitated deployment of 20 numbers of small solar power plant in rural areas with cumulative capacity of 0.519 MW.
- Annual report of MNRE specifies implementation of 37 number of solar water pumps in the state.

STATE PROFILE OF MIZORAM

Geographical Profile

Mizoram lies in the North-East Region of India at an altitude of 1132 meters above sea level extending from 92°.15' E to 93°.29' E and 21°.58' N to 24°.35' N. It has an international border with Myanmar and Bangladesh and inter-state border with Assam, Tripura and Manipur. As per 2011 census, the total population was 10,97,206 with a literacy of 91.33%.

Figure 1: Map of Mizoram

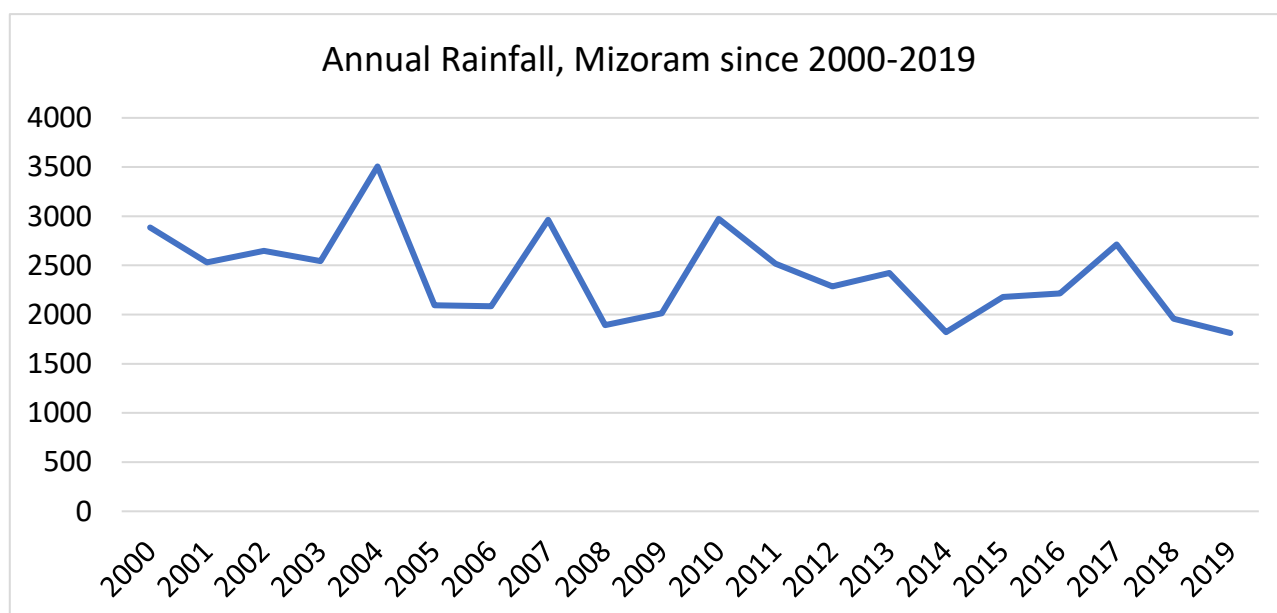


Climate Profile – Mizoram

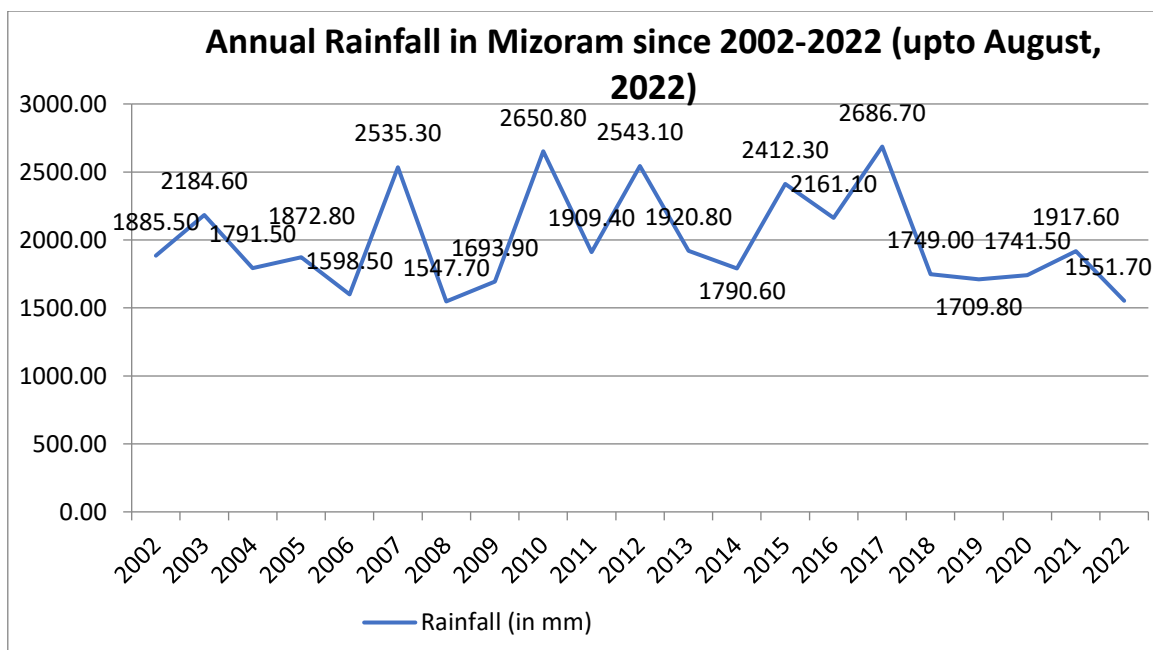
Due to its geo-climatic condition, Mizoram is one of the most hazard prone states in the country. The state is annually swept by cyclonic storms, cloudbursts, hailstorms and landslides. To make matters worse, the State falls under Seismic Zone V, and thus prone to strong earthquakes. Although the State receives abundance of rainfall during monsoon period, the dry spell during non-monsoon period is really hard for the people. Due to the steepness of the hillsides, underground water retention is minimal, causing perennial water sources to dry up during this period. This had been aggravated by the traditional custom as slash and burn.

Annual Rainfall

The annual rainfall shows decreasing trend since the year 2010 to 2019. The mean annual rainfall is 2403 mm with a standard deviation of 452.32 mm. The graph below shows the annual rainfall since 2000 to 2019.

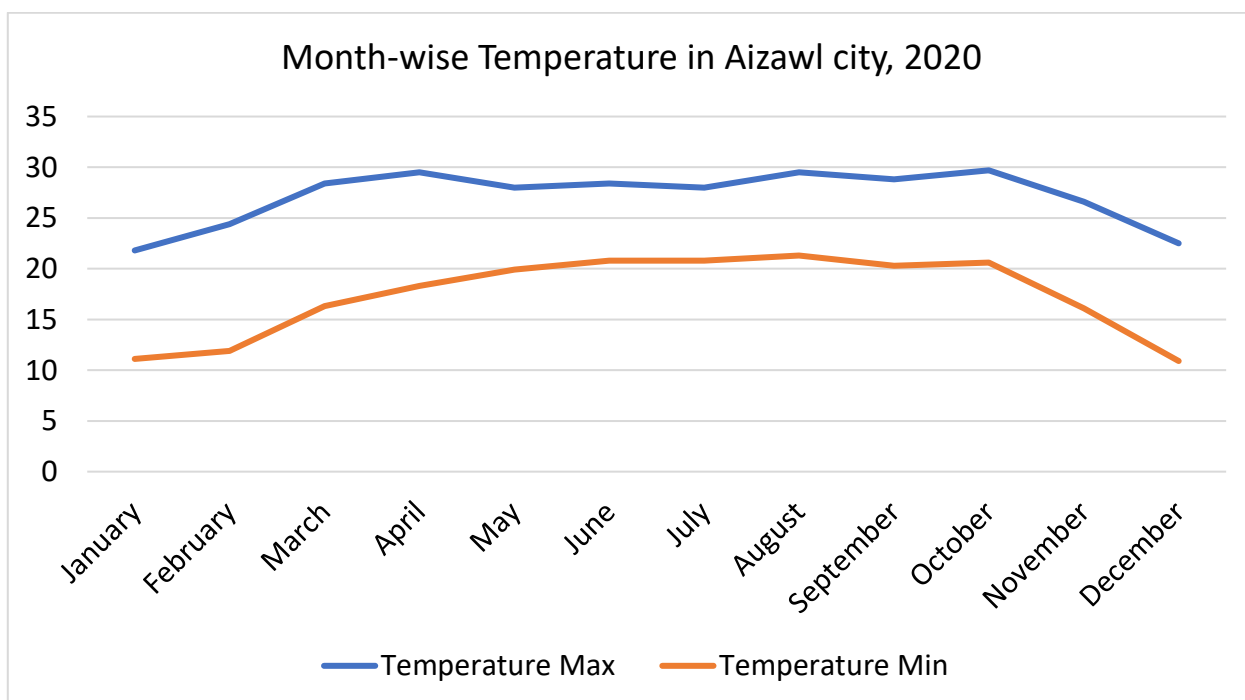


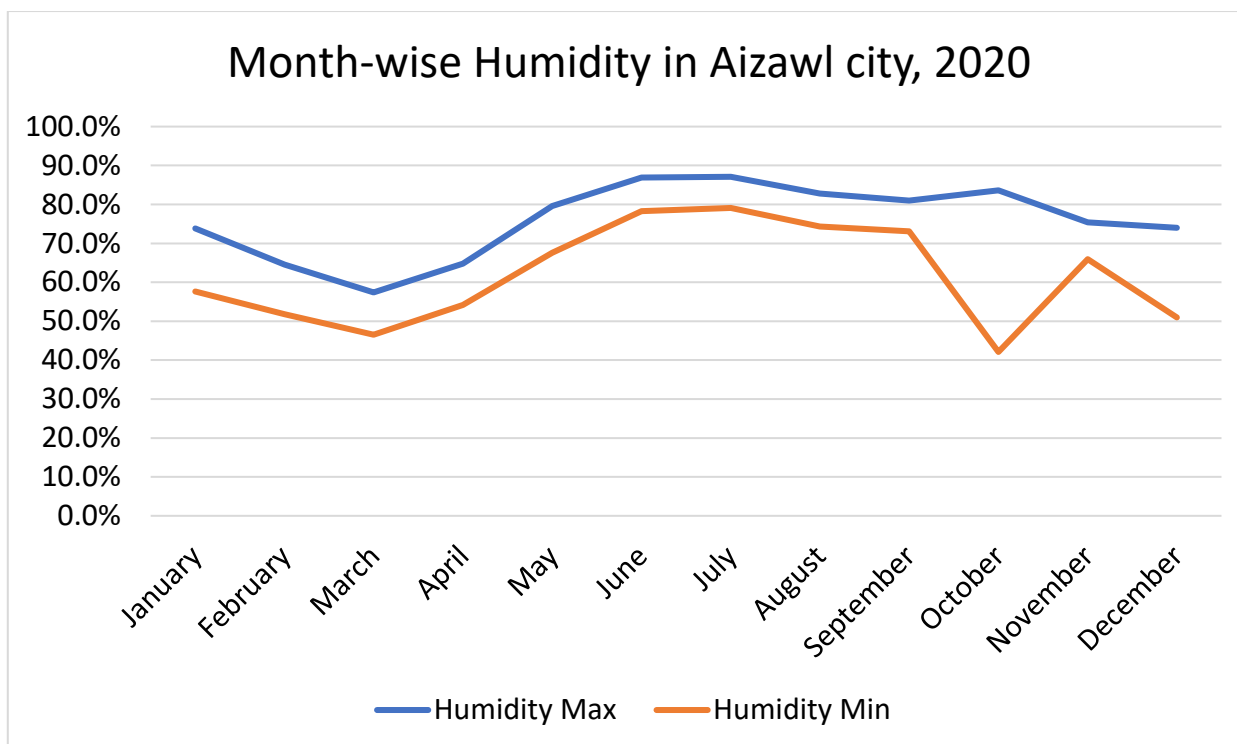
The annual rainfall shows decreasing trend since the year 2002 to 2021. The mean annual rainfall is 2015.1 mm with a standard deviation of 354.5 mm. The graph below shows the annual rainfall since 2002 to 2021.



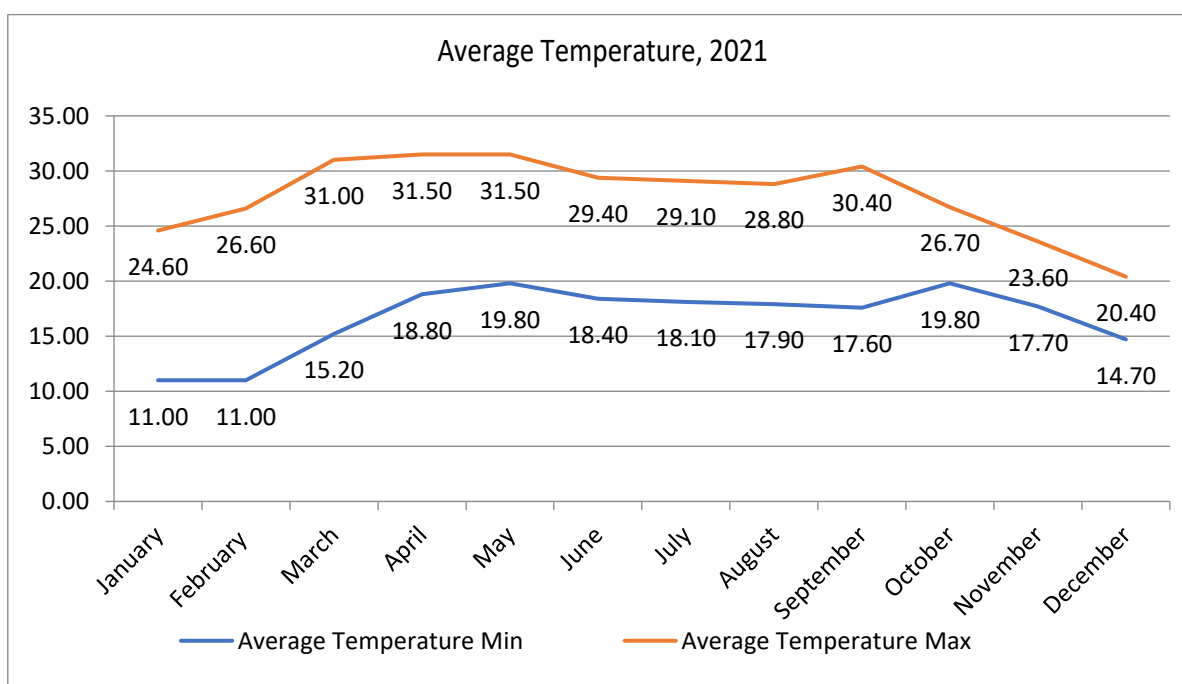
Temperature:

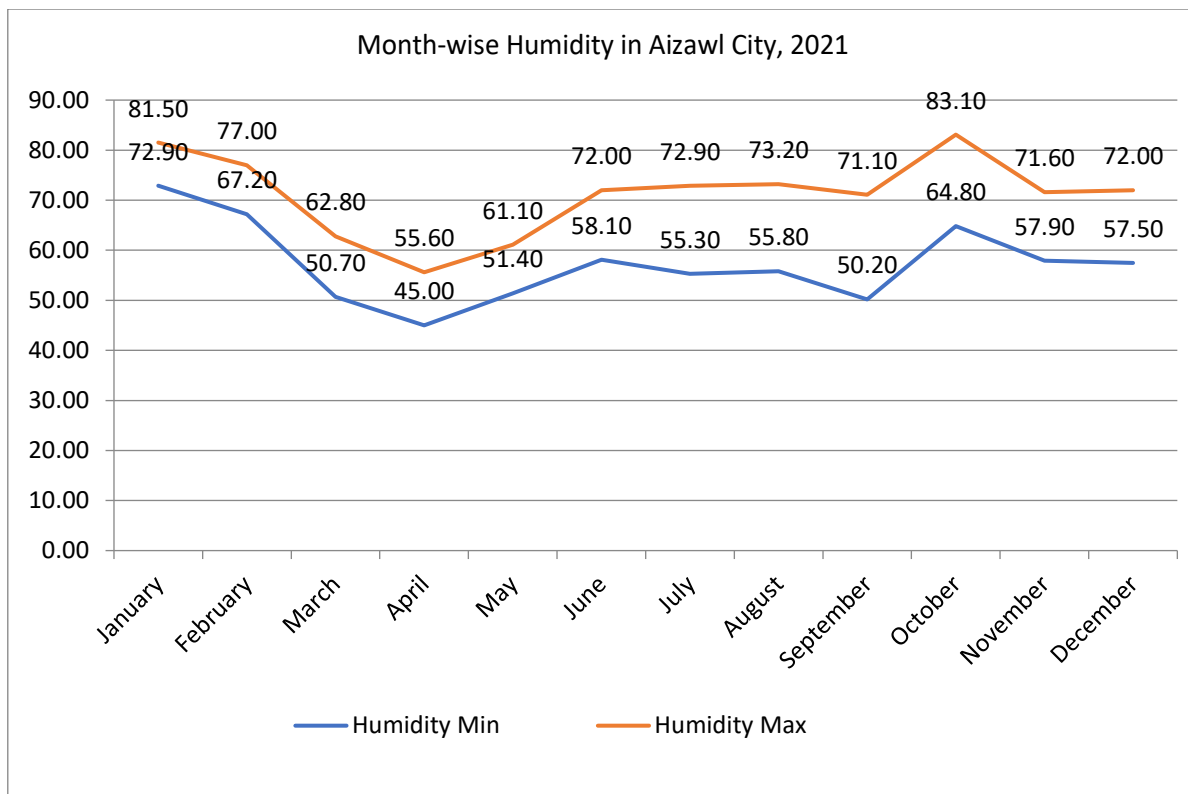
During the year 2020, the state records a maximum temperature of 29.7°C during the month October and the lowest 10.9°C during December. Relative Humidity was at peak during the month July – 87.1% and lowest during the month October with 42.1%. The graph below shows month-wise temperature and humidity in Aizawl City, the state capital during the year 2020.





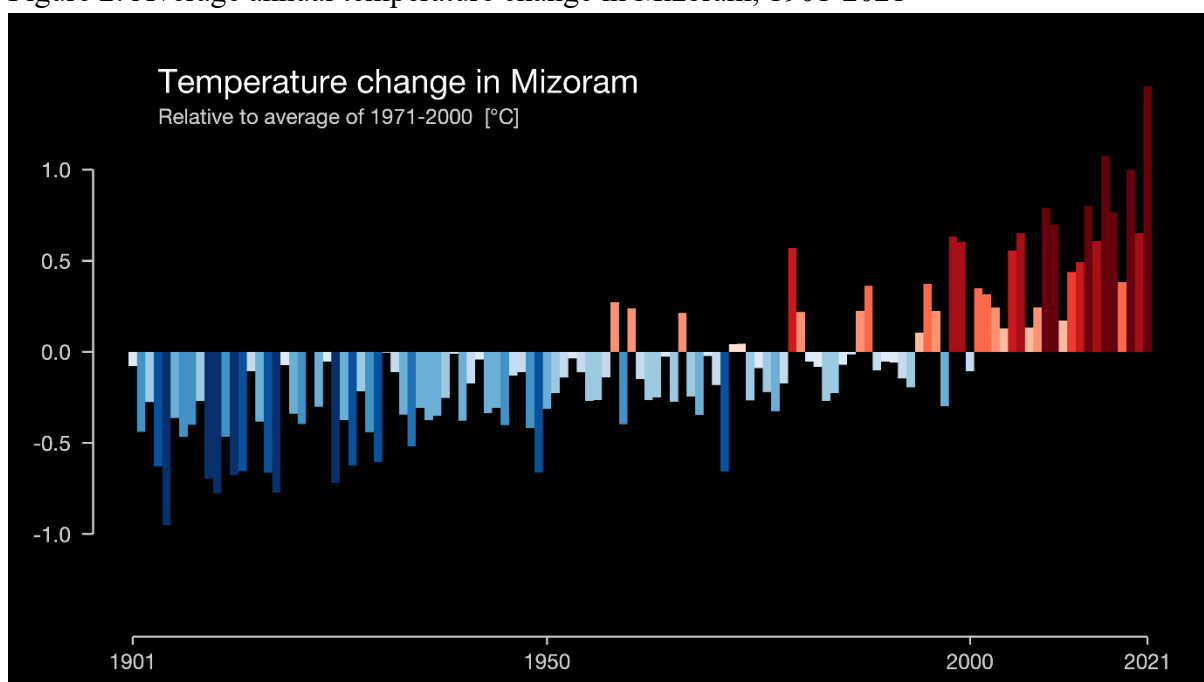
During the year 2021, the state records a maximum temperature of 31.50°C during the month of April and the lowest 11.0°C during January and February. Relative Humidity was it peak during the month October – 83.10% and lowest during the month April with 45.00%. The graph below shows month-wise temperature and humidity in Aizawl City, the state capital during the year 2021.





Overall, long term trend in average annual temperature of Mizoram state has shown increase as the global warming continues. That means people are now being exposed to hotter summers than they have experienced earlier.

Figure 2: Average annual temperature change in Mizoram, 1901-2021



Source: Warming stripes by [Ed Hawkins](#)

Vulnerability Profile

Climate Change vulnerability is defined as the propensity to be adversely affected by climate change (IPCC 2014). Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope with and adapt to future changes (IPCC 2014). Vulnerability is endogenous characteristic of a system and is determined by its sensitivity and adaptive capacity.

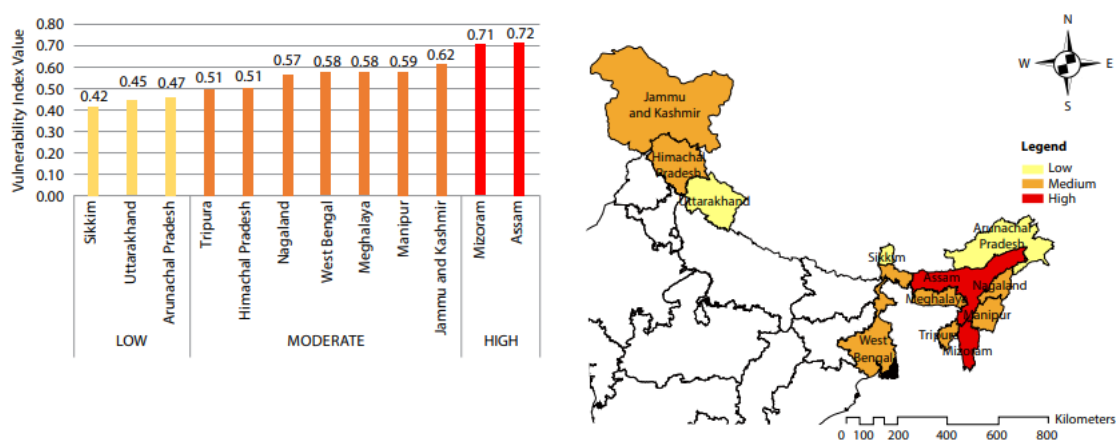
Sensitivity may be defined as degree to which a system is affected by or responsive to climate stimuli. It may also be termed as lack of adaptive capacity. For e.g., an area having steep slope will be sensitive than gentle slope to climate stimuli.

Adaptive capacity can be defined as the potential or capability of a system to adapt to or alter to better suit climatic stimuli or their effects or impacts. For e.g., an area with high forest cover will have better adaptive capacity in response to climate change.

Risk is defined as the potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk arises from interaction of hazard, exposure and vulnerability. It is often represented as probability or likelihood of occurrence of hazardous events or trends occur.

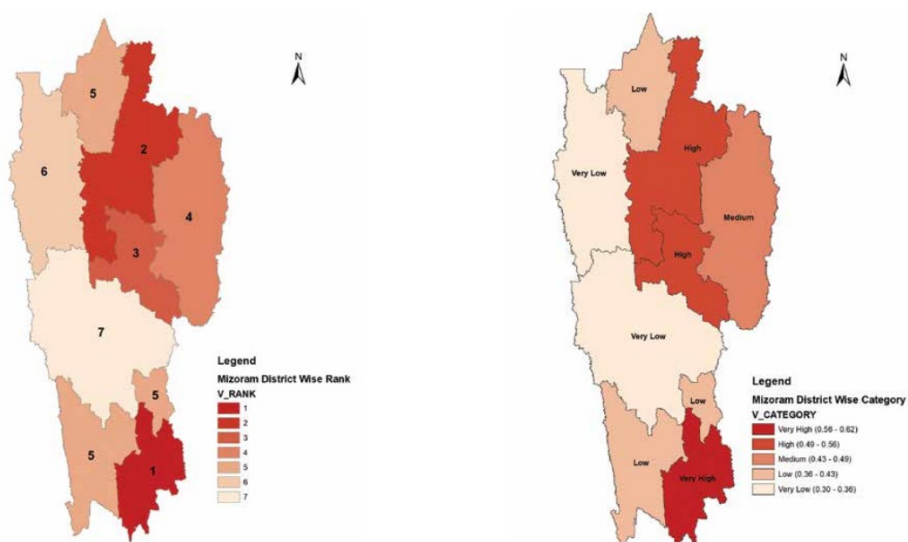
According to Climate Vulnerability Assessment for the Indian Himalayan Region Using a Common Framework, Mizoram is having highest vulnerability with score of 0.71 following Assam, among 12 Indian Himalayan States. Based on integrated vulnerability assessment using broad indicators on 1) Socioeconomic, demographic status and health, 2) sensitivity of agricultural production, 3) forest dependent livelihoods and 4) access to information services and infrastructure, the state has very high sensitivity of agriculture sector along with poor connectivity, access to information and infrastructure.

Figure 3: Vulnerability Ranking of States of Indian Himalayan Region



Similar assessment at district-level, ranks districts Aizawl and Saiha at high vulnerability.

Figure 4: District -level vulnerability ranking based on integrated vulnerability assessments, Mizoram



CLIMATE SENSITIVE ISSUES/DISEASES IN MIZORAM

Table 1: Demography as per Census 2011

Total population	10,97,206
Male population	5,55,339
Female population	5,41,867
Sex ratio	976 females per 1000 males
Population density	52 per/sq/km
Rural population	5,25,435 persons
Urban population	5,71,771 persons
Child population (0 – 6 yrs)	1,68,531 persons
Decadal growth rate	23.48% (1991-2011)
Child population (0 – 6 yrs)	1,68,531 persons
Total workers	44.36%
Effective Literacy Rate	91.33%

Table 2: Healthcare infrastructure in Mizoram

As per the Gazette published by Health & Family Welfare Department, Government of Mizoram dated 20th October 2021 health infrastructure within Mizoram as follows:

S. No.	District	Private Hospitals	Medical College	District Hospital	Sub-District Hospital	CHC	PHC	UPHC	Sub Centres	Clinics
1	Aizawl East	9	1	1	1	2	3	3	41	31
2	Aizawl West	7	0	1	0	1	3	3	34	26
3	Champhai	2	0	1	0	0	5	1	32	15
4	Hnahthial	0	0	1	0	0	5	0	16	5
5	Khawzawl	0	0	1	0	1	4	0	19	10
6	Kolasib	1	0	1	0	1	5	0	26	9
7	Lawngtlai	2	0	1	0	1	6	0	35	18
8	Lunglei	4	0	1	1	0	6	2	57	16
9	Mamit	0	0	1	0	1	10	0	40	10
10	Saitual	0	0	1	0	1	5	0	27	9
11	Serchhip	1	0	1	0	1	5	0	28	7
12	Siaha	1	0	1	0	0	4	0	24	14
	Total	27	1	12	2	9	61	9	379	170

Climate Sensitive Issues/Diseases in Mizoram:

There are 17 Climate Sensitive Health Issues identified under NPCCHH programme for health sector strengthening e.g. Air Pollution related illness, Vector Borne Diseases, Disaster Related Illness, Nutrition related diseases, Water-borne diseases, Occupational health, Food security, mental health, Cardio pulmonary diseases, Hilly region and Mountainous Climate Sensitive Diseases, Zoonotic diseases, and one health and development of Environmentally Friendly (Green) and Climate Resilient Infrastructure.

The State Action Plan on Climate Change and Human Health outlines activities to be conducted under priority Climate Sensitive Diseases.

- i) Acute Respiratory Illnesses attributed to Air Pollution
- ii) Heat related Illnesses
- iii) Vector Borne Diseases
- iv) Extreme weather events related health issues
- v) Environmentally Friendly (Green) and Climate Resilient Infrastructure

i) Acute Respiratory Illnesses attributed by Air Pollution:

There are no cities included under NCAP from Mizoram. However, the pollution levels recorded in Aizawl are often higher than updated WHO standards of air quality. The sources of deterioration of air quality in Mizoram is often mainly due to shifting cultivation or slash and burn agriculture or jhum burning. Wild fires and wood burning as fuel also add to outdoor and indoor air pollution exposure.

Table 3: Annual pollutants CPCB report, Aizawl Mizoram

Year	PM ₁₀ (µg/m ³)	NO ₂ (µg/m ³)	Reference	Number and type of monitoring stations	Version of the database
2010		5.67	Central Pollution Control Board	3 NA	2022
2011		5.4		5 NA	2022
2012		10		5 NA	2022
2013		9.2		5 NA	2022
2014		7.4		5 NA	2022
2016	59.8	7.6		5 NA	2022
2017	51.6	8		5 NA	2022
2018	49.8	8.6		5 NA	2022

ii) Heat Related Illness

The rise in temperature due to climatic change is likely to intensify the summer conditions with heat waves poses risk of deaths from heat strokes, heat-related illnesses and injury in unacclimatized population. The risk is higher among the vulnerable group which includes infants, elderly persons, pregnant woman, urban poor and labourers.

Heat wave vulnerability index, an aggregate of demographic, socio-economic, population health, and land cover indicators ranked districts on a scale from very high to very low vulnerability.

Table 4: Districts-level heat vulnerability, Mizoram

District Name	HVI	HVI Category
Lawngtlai	2.123868	3
Mamit	-0.51329	4
Kolasib	-1.57213	4
Serchhip	-1.64127	4
Champhai	-2.11848	4
Lunglei	-2.97315	4
Saiha	-4.26548	5
Aizawl	-6.20422	5

Source: Azhar G. Indian Summer: Three Essays on Heatwave Vulnerability, Estimation and Adaptation. *Indian Summer Three Essays Heatwave Vulnerability, Estim Adapt.* 2019; (August). doi:10.7249/rgsd431

iii) Vector Borne Diseases

Mizoram is a hardcore malarious area with around 7-9 months of open transmission window. The weather condition (hot and humid for around 9 months) in the region is conducive for both mosquito proliferation and active malaria transmission. Mostly pockets in forest, forest-fringe and foothill villages located along inter country/interstate border are vulnerable to occasional outbreaks.

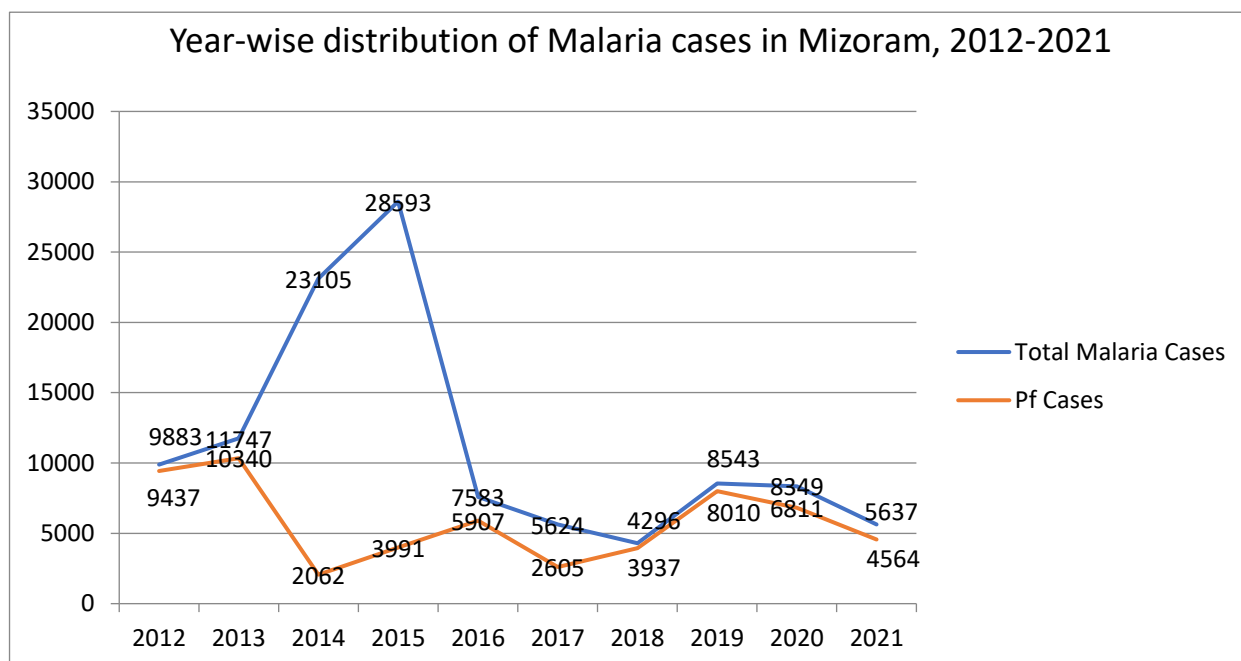
The National Vector Borne Disease Control Programme (NVBDCP) is an umbrella programme for prevention and control of Malaria and other vector borne diseases viz., Lymphatic Filariasis, Kala-azar, Japanese Encephalitis, Chikungunya and Dengue.

Malaria:

Historically, Malaria has been a dreaded endemic disease in Mizoram. However, due to distribution of Long-lasting Insecticidal Nets (LLINs) in 2016 through assistance received from GLOBAL Fund for AIDS, Tuberculosis and Malaria (GFATM), there has been a drastic reduction in cases and deaths from Malaria all over the state. This reduction has been sustained through the efforts of National Vector Borne Disease Control Programme (NVBDCP).

Table 5: Year wise Distribution of Malaria Cases in the district of Mizoram.

DISTRICT	YEAR									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Aizawl East	137	232	509	485	122	52	12	37	13	29
Aizawl West	219	312	714	852	299	2621	45	53	27	43
Lunglei	3042	3972	6020	7745	2335	810	1092	2430	2926	1817
Siaha	182	488	822	1087	323	93	103	279	396	430
Kolasib	329	312	864	936	230	74	36	24	34	34
Mamit	774	1649	5066	8766	1699	359	772	1903	727	974
Champhai	96	92	82	75	25	3	6	19	20	26
Lawngtlai	5034	4619	8850	8486	2506	1608	2222	3780	4190	2241
Serchhip	70	71	178	161	44	4	8	18	16	43
TOTAL	9883	11747	23105	28593	7583	5624	4296	8543	8349	5637

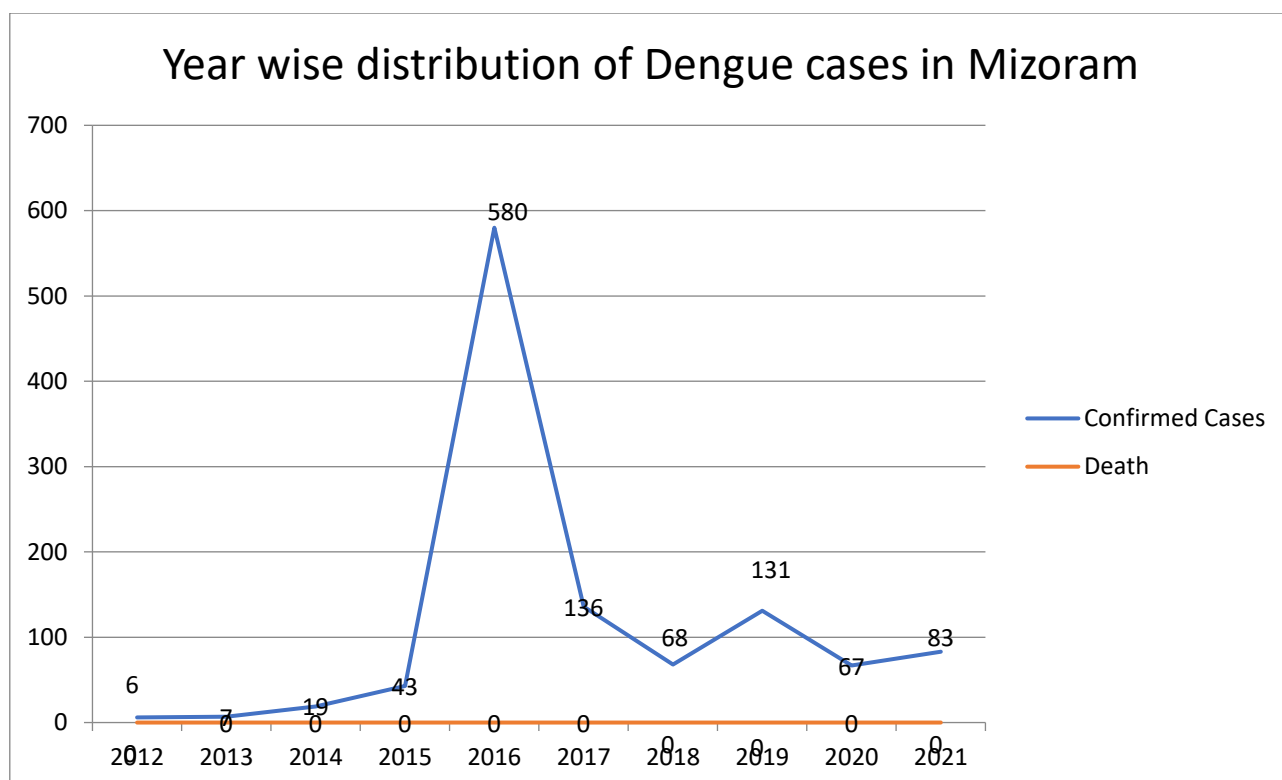


Dengue:

Dengue has been diagnosed in the state since 2012. As our Diagnostic capabilities will increase in the coming years, a greater number of cases may get diagnosed unless urgent and effective actions are undertaken.

Table 6: District-wise Dengue Case load in Mizoram

District	Year									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Aizawl West	2	1	8	16	103	41	33	62	11	36
Aizawl East	3	1	8	19	413	60	16	33	7	28
Lunglei	0	0	1	2	4	18	3	3	36	5
Siaha	0	0	0	0	0	0	0	1	1	1
Kolasib	0	0	1	1	47	10	5	0	2	2
Mamit	0	0	1	3	4	1	4	24	3	3
Champhai	1	5	0	2	8	3	3	5	4	4
Lawngtlai	0	0	0	0	0	2	1	1	0	2
Serchhip	0	0	0	0	1	1	3	2	2	2
Total	6	7	19	43	580	136	68	131	67	83



Vulnerability Assessment based on prevalent vector borne diseases under Climatic Conditions in Mizoram,2021:

The present district-level vulnerability assessment was conducted for 8 districts based on 6 indicators for Tier 1 vulnerability assessment. The list of indicators for Tier 1 vulnerability assessment relevant to districts, rationale for selection, functional relationship with vulnerability and sources of data is presented in Table 1. Weights are assigned to each indicator in consultation with different concerned officials. Each of these officials assign weights to the indicators and the resulting weights are averaged.

Table 7: List of indicators for Tier 1 vulnerability assessment relevant to districts, rationale for selection, functional relationship with vulnerability and sources of data.

Indicators	Rationale for selection	Adaptive capacity or Selectivity	Functional relationship with Vulnerability	Source of data
Malaria (API rate) per 1000 persons	Higher the API rate of Malaria, higher will be its vulnerability due to climate change in health	Sensitivity	Positive	NHM-HMIS 2017-18
Dengue (per 1000 persons)	Higher the API rate of Dengue, higher will be its	Sensitivity	Positive	NHM-HMIS

	vulnerability due to climate change in health			2017-18
Scrub Typhus (per 1000 persons)	Higher the API rate of Scrub Typhus, higher will be its vulnerability due to climate change in health	Sensitivity	Positive	NHM-HMIS 2017-18
No. of hospitals/PHC/CHC etc	Hospitals and Health Centres are the places where most health-related problems are diagnosed and treated. As such, a greater number of such centres establishments creates better resilience to health of the population of that area.	Adaptive Capacity	Negative	NHM-HMIS 2017-18
No. of Doctors/Nurse/HW etc	More number of Doctors/Nurses/HW etc more people could be treated at a time and hence higher resilience to climate change	Adaptive Capacity	Negative	NHM-HMIS 2017-18
Infant Mortality Rate (per 1000 live births)	Higher the Infant Mortality Rate, higher will be its vulnerability due to climate change in health	Sensitivity	Positive	NHM-HMIS 2017-18

Table 8: Weights assigned to Indicators

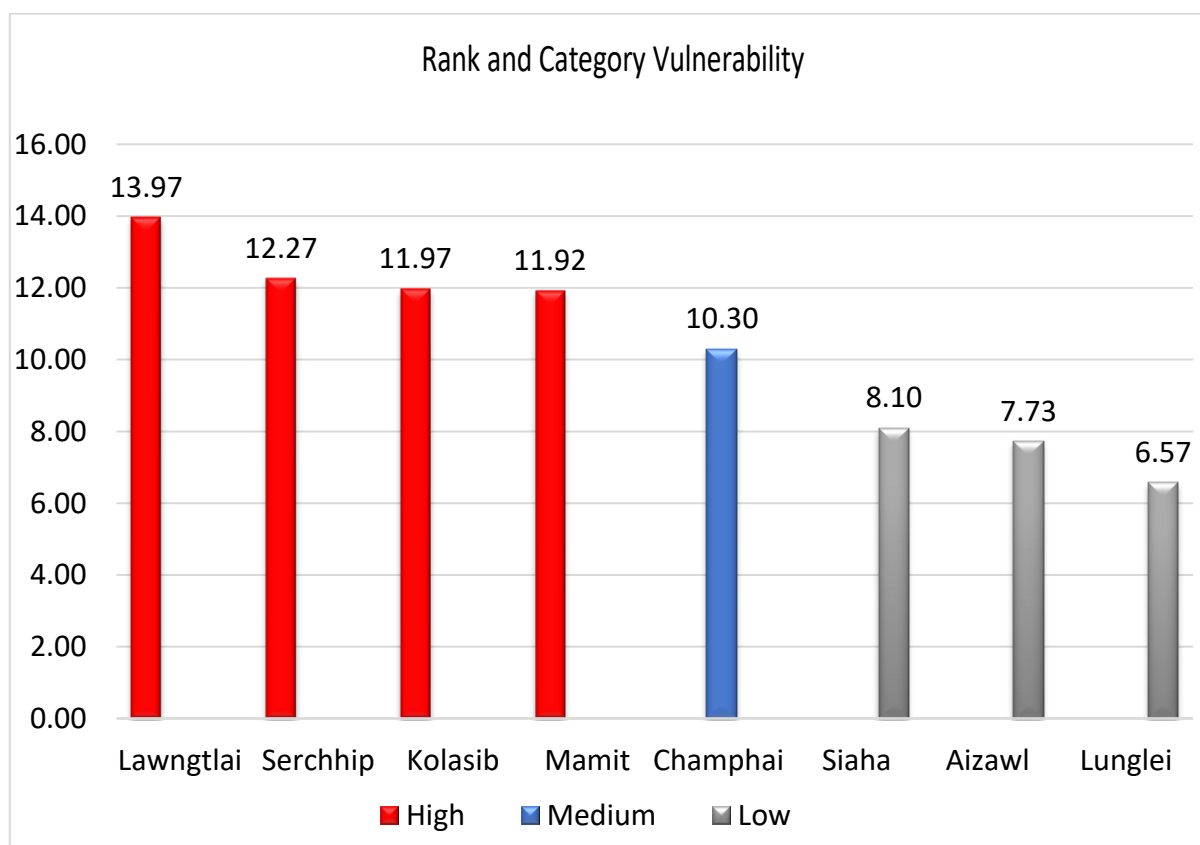
Indicators	Weights (W)
Malaria (API rate) per 1000 persons	10
Dengue (per 1000 persons)	10
Scrub Typhus (per 1000 persons)	5
No. of hospitals/PHC/CHC etc	20
No. of Doctors/Nurse/HW etc	20
Infant Mortality Rate (per 1000 live births)	30

Total	100
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Table 9: Vulnerability profile and ranking of Districts of Mizoram.

Districts	Vulnerability Index Value	Vulnerability Ranking	Vulnerability Scale
Mamit	11.92405	4	High
Kolasib	11.9705	3	High
Aizawl	7.730408	7	Low
Champhai	10.30114	5	Medium
Serchhip	12.26854	2	High
Lunglei	6.573479	8	Low
Lawngtlai	13.97345	1	High
Siaha	8.096575	6	Low

*Source: Report on ‘Vulnerability Assessment of Human Health under current climatic conditions of Mizoram, 2021).



The present Vulnerability Assessment, 2021 reveals that **Lawngtlai** is the most vulnerable within the state. This is due to the fact that Lawngtlai District has the highest Annual Parasitic Incidence of Malaria, coupled with low number of health workers and the highest Infant Mortality Rate within the state.

The results shows that four districts (Lawngtlai, Serchhip, Mamit & Kolasib) fall under high vulnerable category., one district (Champhai) under medium vulnerability and three districts (Aizawl, Lunglei & Siaha) under low vulnerable category. However, districts falling under low vulnerable category are not to be assumed non vulnerable as the assessment done is comparative and not absolute.

The report provides the first ever sights insights at the present condition of health-related vulnerability and how local vulnerabilities is assessed at the district level for the state of Mizoram. A climate and health vulnerability assessment allows policy makers and concerned departments along with the community leaders to understand the people and places in their jurisdiction that are more susceptible to adverse health impacts associated with climate change.

iv) **Extreme Weather Events**

Due to its geographic, geological and physical features, Mizoram is vulnerable to all-major natural hazards (Drought, Flood, Cyclone, Earthquake, Landslide etc.). According to Mizoram State Disaster Management Authority, the State is also under constant threat of cloud burst and landslide disasters which is well supported by the fact that more than 71% of the total area are in Very High to Moderate Hazard Zone.

a. Landslide:

Mizoram, being a hilly terrain is prone to landslides based on the geographical structure and land use patters further aggravated by heavy rainfall. As per records of DM&R Dept., incidents of landslides from 2013 to 2019 are prominent in all districts of the State. Most districts and many towns have conducted micro-level hazard vulnerability. Any consideration of building new health facility or retrofitting of existing health facilities should include assessment of hazard vulnerability due to landslide.

Table 9: Landslide hazard area in Mizoram

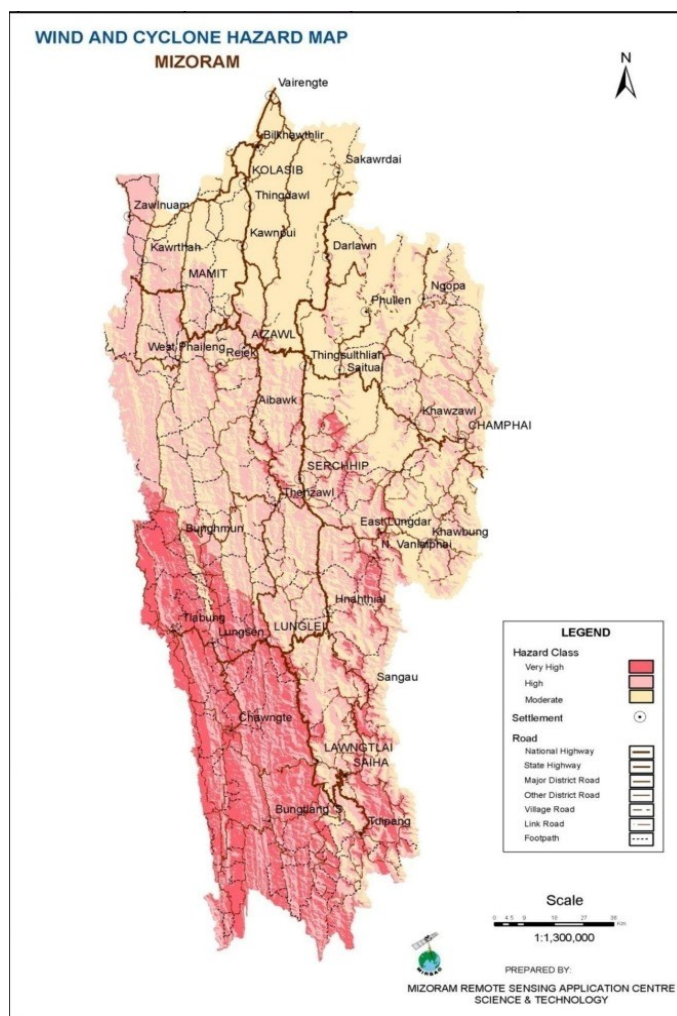
LHZ Code	Hazard Class	Area (Sq. Km)	%
1	Very High	1822.48	8.65
2	High	4263.79	20.22
3	Moderate	8903.47	42.24
4	Low	5011.57	23.77
5	Very Low	968.72	4.60
6	Water Body	111.97	0.53
Total		21081.00	100.00

* LHZ – Landslide Hazard Zonation

b. Cyclone and wind storms

Some area of the state occasionally experiences very high winds. It is advisable to adopt and implement relevant wind resistant construction guidelines for resiliency of health infrastructure.

Figure 5: Wind and cyclone hazard map, Mizoram

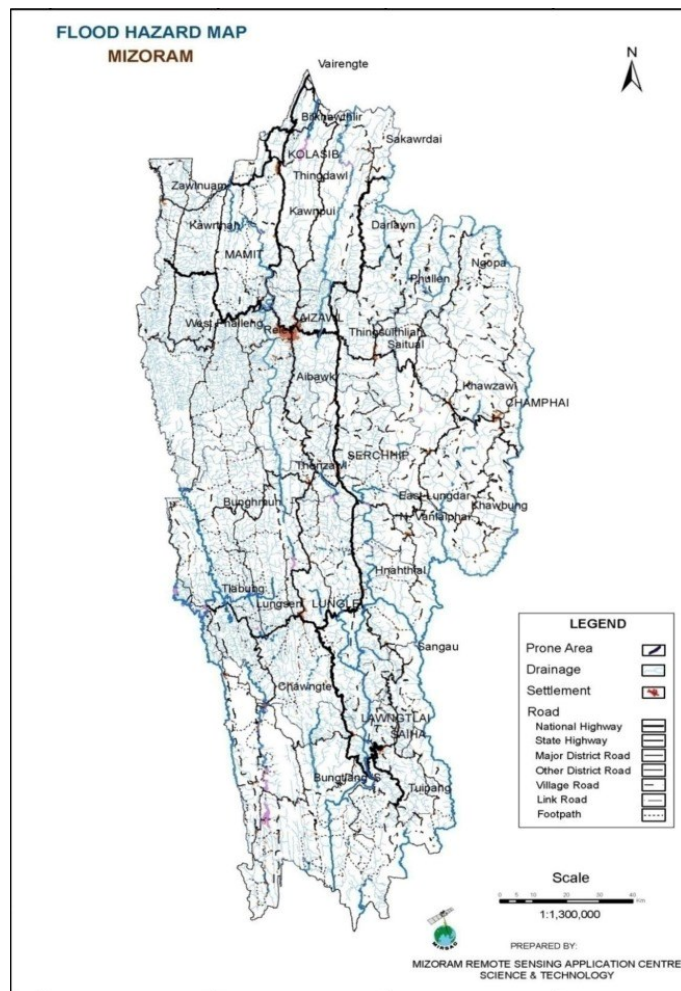


Source: Mizoram State
Disaster Management Plan
2021

c. Floods

In Mizoram, floods occur in river valleys, when flow exceeds the capacity of the river channel, particularly at bends or meanders. Settlements lying in close proximity to the rivers are prone to flood hazard. There may be flash floods in case of heavy rain. Township like Tlabung in Lunglei District, Chawngte in Lawngtlai District, Sairang in Aizawl District and Bairabi in Kolasib District, which are situated in extremely low-lying area, are in high risk for urban flooding. Health facilities located in flood prone areas should be prioritized for implementation of climate-resilient measures.

Figure 5: Flood hazard map, Mizoram



NPCCHH: VISION, GOAL AND OBJECTIVES

Vision

To strengthen health of citizens of India against climate sensitive illness, especially among the vulnerable like children, women and marginalized population.

Goal

To reduce morbidity, mortality, injuries and health vulnerability to climate variability and extreme weathers.

Objective

To build capacity of health care services against adverse impact of climate change on human health.

Specific Objectives

Objective 1:

To create awareness on the impacts of climate change on human health among general population (vulnerable community), health-care providers and policy makers.

Objective 2:

To strengthen capacity of health system (infrastructure, training, development of resource material and HMIS) to respond to climate sensitive illness/ diseases.

Objective 3:

To perform situational analysis to strengthen preparedness and response at national / state / district / below district levels to cope with adverse health impacts of climate change related disasters and climate sensitive diseases through health adaptation/action plans and accordingly build capacities to adapt and mitigate in health sector.

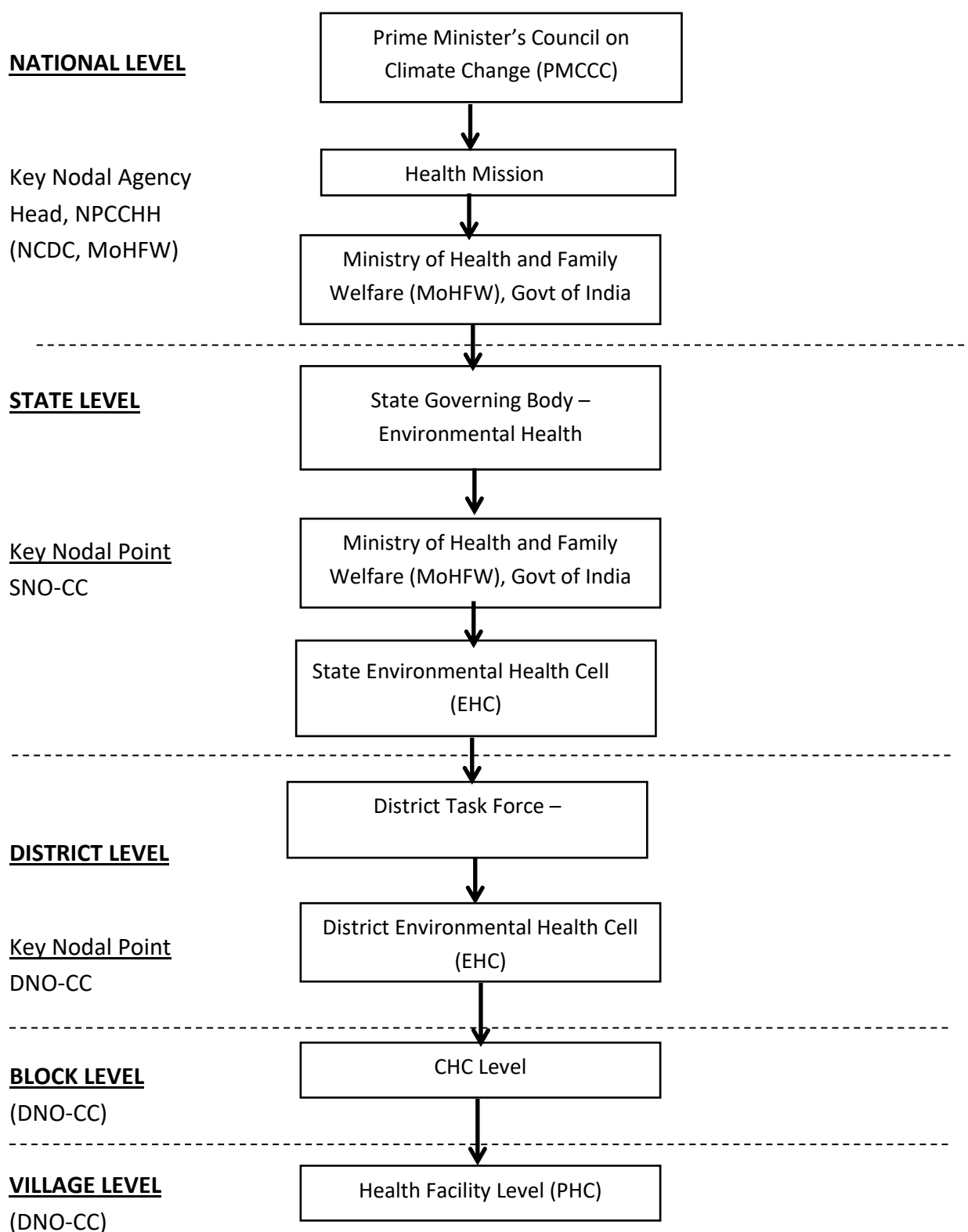
Objective 4:

To develop partnerships with stakeholders in the private sector, the civil society and other stakeholder government departments, and creating synchrony/ synergy with other missions on climate change and ensure that health is properly represented in the climate change agenda in the country.

Objective 5:

To strengthen research capacity to fill the evidence gap on climate change impact on human health

SAPCCHH: ORGANISATIONAL FRAMEWORK



Relevant orders of EHC (State & District), Task force (State Level & District Level)
Governing Body, DNO in **Annexure (A, B, C, D, E & F)**

Part 2: Health Adaptation plan on Climate Sensitive Health Issues

Planning of activities under NPCCHH should be done in accordance with PIP guidelines

Health Adaptation Plan for Acute Respiratory Illnesses attributed to Air Pollution.

Air pollution is a major environmental risk to health. The formation, transport and dispersion of many air pollutants is determined partly by climate and weather factors such as temperature, humidity, wind storms, droughts, precipitation, and partly by human activities known to produce various air pollutants. It is thus logical to assume that climate change will influence the dynamics of air pollution. By reducing air pollution levels, states can reduce the burden of disease from stroke, heart diseases, lung cancer, and both chronic and acute respiratory diseases including asthma.

Two major types of Air Pollution

- i) Ambient (Outdoor) Air Pollution
- ii) Household (Indoor) Air Pollution.

Ambient (outdoor air pollution) in both cities and rural areas was estimated to cause 3.7 million premature deaths worldwide in 2012. Air pollution also affects health by causing acid rain; eutrophication due to nitrogen oxides, emission in air from power plants, cars, trucks, and other sources; Haze; toxic effects on wildlife; Ozone depletion; Crop and forest damage etc. Over 4 million people die prematurely from illness attributable to the household air pollution from cooking with solid fuels. 3.8 million premature deaths annually from non-communicable diseases including stroke, ischemic heart disease, chronic obstructive pulmonary disease (COPD) and lung cancer are attributed to exposure to household air pollution.

Prominent causes of Air Pollution in Mizoram

- 1. Pollution by automobiles
- 2. Jhum Cultivation

Prominent causes of Household Air Pollution in Mizoram

- 1. Use of biomass, kerosene as fuel for cooking.
- 2. Cigarette smoking

Number of AQI monitoring stations within state:

By State Pollution Control Board: 1

Air Quality Index: Air Quality Index is a tool for effective communication of air quality status to people in terms, which are easy to understand. It transforms complex air quality data of various pollutants into a single number (index value), nomenclature and colour.

Air Quality Index (AQI) Category	
Good	0-50
Satisfactory	51-100
Moderately Poor	101-200
Poor	200-300
Very Poor	300-400
Severe	401-500

Planning of activities under NPCCHH should be done in accordance with PIP guidelines

a) Hospital Preparedness

A committee on air pollution and health to be constituted preferably including officials from departments of Medicine, Respiratory Medicine Pediatrics, Cardiology, Neurology, Endocrinologists, etc. Including emergency and nursing division and Pharmacists.

The Committee will be responsible for development of specific action plan for hospital to address the health issues related to air pollution in its catchment areas. Such action plan will consist of activities to strengthen healthcare services in the facility in the context of air pollution, Key activities may include:

- OPD for Pediatrics/Medicine/Respiratory Medicine/Cardiology/NCD, etc. where more cases of impact of air pollution are likely to come
- Emergency services for illness related to respiratory and cardiovascular illness
- Counselling and awareness generation for friends and families of the patients
- Enhancing functional capacity for emergency, beds, drugs and diagnostics, equipments, etc.
- Enabling community outreach activities to generate awareness
- Capacity building of health professionals and workers to address health impacts of air pollution
- Establishment of surveillance mechanisms
- Strengthening supply chain and logistics to make medicines, diagnostics and equipments available, including provision for buffer stock
- Enhancing capacity and availability of oxygen cylinders, nebulizers ventilators in case of increased demand and for intensive care

b) Information, Education & Communication (IEC) Activities

i) Target district or population:

All the 9 districts of Mizoram (Aizawl East, Aizawl West, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Serchhip & Siaha District.

ii) **Dissemination of IEC for Air Pollution under NPCCHH, Mizoram.**

IEC type	Material	Timeline	Mechanism
Advisory	bit.ly/NPCCHHPrg	August - September	By email to DNO for further dissemination to healthcare facilities
Early Warning	AQI level with health risk category	Year around	<ul style="list-style-type: none"> • Digital display on public places and health facilities • Newspaper • Health department/other government website/application
Posters	<ul style="list-style-type: none"> • Posters on Air Pollution and health impacts (English) • Posters on Air Pollution and health impacts (Mizo) bit.ly/NPCCHHIEC	September - October	<ul style="list-style-type: none"> • Printing for state level dissemination at health facilities, public places/buildings • District to collect IEC material and dissemination to health facilities, schools and other public/government buildings
Wall painting	<ul style="list-style-type: none"> • Using available material 	September - October	<ul style="list-style-type: none"> • In schools and selected colleges • In health facilities
Hoardings	Posters in Mizo (above)	February	<ul style="list-style-type: none"> • To be discussed with Municipal Council
Audio-Visual	<ul style="list-style-type: none"> • 2 Audio jingles (English & Mizo) • 2 Video messages (English & Mizo) Bit.ly/NPCCHHIEC	October-March	
Bus painting	<ul style="list-style-type: none"> • Using available material 	October-November	
Digital display	<ul style="list-style-type: none"> • 4 GIF bit.ly/NPCCHHIEC • Above mentioned video messages 	September -October	<ul style="list-style-type: none"> • Display in health facilities • Public digital display boards in major cities
Social media	<ul style="list-style-type: none"> • All above material plus relevant activities updates 	Throughout the year	<ul style="list-style-type: none"> • Facebook and twitter handle of state NPCCHH, NHM • Whatsapp groups (State DNO, Health facility group)

iii) Preparatory work for IEC dissemination:

IEC	Activities
<ul style="list-style-type: none"> • Language translation • Printing • Spot booking 	Ongoing

iv) Observance of days

Day	Activities
International Day of Clean Air for Blue Skies (September 7) Other days: <ul style="list-style-type: none"> • World Car Free Day (September 22) • World Environmental Health Day (September 26) • Green Consumer Day (September 28) 	<ul style="list-style-type: none"> • Day Observation at Health & Wellness Centres.

c) Capacity building Activities

i. Training material

Guidelines: (available bit.ly/NPCCHHguidelines)

- Health Adaptation Plan for Disease due to Air Pollution
- Health Sector Preparedness for Air Pollution
- Handbook for Health Professionals & its impact on Health

Training modules: (available bit.ly/NPCCHHguidelines)

- Women Training Manual (English, Hindi)
- Children Training Manual (English, Hindi)
- Traffic Police Training Manual (English, Hindi)
- Municipal Worker Training Manual (English, Hindi)

Other training resources: NPCCHHchannel<https://bit.ly/NPCCHHyt>

ii Annual Training Plan for Air Pollution and Health under NPCCHH, Mizoram.

Training Programme	Trainer	Topics	Timeline
District level (DNO-CC, trainers)	State Level Trainers	<ul style="list-style-type: none"> - Air pollution-health impact, prevention measures - Surveillance reporting and analysis with AQI - Health facility preparedness 	September-October

Health facility level (MO of DH/CHC/PHC)	District Level Trainers DNO-CC	<ul style="list-style-type: none"> - Air pollution-health impact, prevention measures - Surveillance reporting and analysis with AQI - Health facility preparedness 	September-October
Community Health Care Workers (Health & Wellness Officers, ANM, ASHA etc)	State & District trainers	<ul style="list-style-type: none"> - Surveillance case identification and reporting 	September-October
VHSNCs and other vulnerable communities (women, children, occupationally exposed, etc)	District Level Trainers, MO, Health & Wellness Officer, Healthcare workers	<ul style="list-style-type: none"> - Air pollution- health impact prevention 	October - February

d) Strengthening Health Sector Preparedness

- National Outdoor Air and Disease Surveillance (NQADS)

i) Surveillance guidelines:

Health Adaptation Plan for Disease Surveillance due to Air Pollutions

<https://bit.ly/NPCCHHNOADS>

Cities in Mizoram not included under NCAP cities.

***Annual pollutants CPCB report:** Aizawl is the only city in Mizoram mentioned in the annual pollutants report by CPCB.

ii) Sentinel- Surveillance sites and Surveillance Nodal Officer under NPCCHH, Mizoram

Sentinel Sites	District	Surveillance Nodal Person
Civil Hospital, Aizawl	Aizawl	Mr. Joseph H. Lalduhkima Designation: Projectionist Contact:9436143262
Synod Hospital, Durtlang		Ms. C. Thankhumi Designation: Nursing Superintendent Contact: 872985633
Ebenezer Hospital, Aizawl		Lucy Lalremruati Designation: Staff Nurse Contact :8478002291
Aizawl Hospital, Aizawl		Medical Officer Contact:

iii) **Surveillance training:** included under capacity building section.

iv) **Surveillance review monitoring:**

- Review with DNO: Quarterly
- Review with Hospital Nodal Officer: Monthly

v) **Revision of Health Action Plan on Air Pollution Related Diseases** in State Action Plan on Climate Change and Human Health (SAPCCHH): The section should be revised every year after February based on targets achieved, surveillance data, climate change impacts and health indicators with support from multi-sectoral task force,

e) Roles and Responsibilities

Category	Responsibilities
SNO	<ul style="list-style-type: none">• Finalization of IEC material and dissemination plan• Organize IEC campaigns at state level on observance of important environment health days• Organize training sessions for district level and surveillance nodal officer• Facilitate training of medical officers in clinical aspects of air pollution's health impact.• Real time air quality data dashboard in proposed cities• Monitor AQI levels in states especially in hotspots and NCAP cities.• Ensure reporting from sentinel hospitals and DNO• Ensure necessary health facility preparedness• Review surveillance reporting and monthly report submissions by DNO• Submit report of activities• Review implementation of IEC and surveillance activities• Evaluate and update relevant section of SAPCCHH with support from State Task Force• Liason with State Pollution Control Board for AQI alerts and its dissemination.• Liason with Department of EF & CC for combined IEC campaigns and information sharing on health indicators for targeted air pollution reduction activities.• Awareness and action plan input sharing with AMC• Create organization support and strengthen Environmental Health Cell to implement NPCCHH surveillance activities.• Submit analyzed monthly report to SNO, NPCCHH Hq and other departments for necessary action.• Submit report of activities.• Update DAPCCHH with support from District Task Force

	<ul style="list-style-type: none"> • Advocate for reduction in source for air pollution.
Surveillance Hospital Nodal Officer	<p>Train hospital staff and clinician responsible for daily reporting in case identification and reporting flow</p> <p>Compile daily reports and submit to DNO and SNO- CC & NCCHH- Mizoram</p>
Medical Officer	<p>Conduct health facility-based IEC activities</p> <ul style="list-style-type: none"> • Support community level IEC activities • Be aware of AQI levels and health impact of air pollution • Ensure necessary health facility preparedness in early diagnosis and management of cases • Community mobilization for reduction in greenhouse gas emissions, and local pollution
Health and Wellness Officer	<ul style="list-style-type: none"> • Conduct community level IEC activities • Organize sensitization workshop and training for VHSNC and vulnerable groups.
VHSNC	<p>Conduct community level IEC activities</p> <ul style="list-style-type: none"> • Community mobilization for reduction in greenhouse gas emissions, and local pollution

Health Adaptation Plan on Heat and Health

In India, heat wave is considered if maximum temperature of a station reaches at least 40°C or more for plains, 37°C or more for coastal stations and at least 30°C or more for hilly regions.

Following criteria are used to declare a heat wave:

a) Based on Departure from Normal (for Hilly and Plain areas)

- Heat wave: Departure from normal is 4.5°C to 6.4°C
- Severe heat wave: Departure from normal is >6.4°C

b) Based on Actual Maximum Temperature (for plains only)

- Heat wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$
- Severe Heat wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$

Different types of heat related illness include:

1. Minor heat related Illnesses: Heat rash, heat cramps, heat syncope
2. Major heat related Illnesses: Heat Exhaustion and heat stroke

A. Health facility preparedness

The salient features of State's health facility level preparedness against heat stress are:

- Standard Operating procedures to tackle all levels of heat-related illnesses.
- Capacity building measures for doctors, nurses and other staff should be undertaken.
- Assessing cases with suspected heat stroke using standard Treatment Protocols.
- Identifying surge capacities and marking of beds dedicated to treat heat stroke victims and enhance emergency department preparedness to handle more patients.
- Identifying RRT (Rapid Response Teams) to respond to any exigency call outside the hospitals.
- Ensure adequate arrangements of Staff, Beds, IV fluids, ORS, essential medicines and equipment to cater to management of volume depletion and electrolyte imbalance.
- Establishing outreach clinics at various locations easily accessible to the vulnerable population to reduce the number of cases affected.
- Health facilities to undertake awareness campaigns for neighborhood communities using different means of information dissemination.
- Hospitals to ensure proper networking with nearby facilities and medical centres to share the patient load which exceeds their surge capacities.
- All cases of heat-related illnesses (suspected or confirmed) to be reported to IDSP (Integrated Disease Surveillance Programme) unit of the district

In addition, using Nation Action Plan on Heat Related Illness (NAPHRI), guidelines by MoHFW state will ensure health facility wise preparedness in all the public health facilities in the state.

As per NAPHRI, state will conduct infrastructure and logistics, capacity building and IEC/awareness activities for three different levels of health facilities, i.e., primary health centre (PHC), Community Health Centre (CHC) and District Hospital (DH)/Medical College (MC). The activities will be prioritized for three seasons, i.e., pre-heat season, heat season and post-heat season

B. Information, Education Communication (IEC) Activities

- i) Targeted districts or population: - All 9 districts of Mizoram (Aizawl East, Aizawl West, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Serchhip & Siahla Districts)
- ii) **Table: Annual IEC dissemination plan on Heat and Health under NPCCHH, Mizoram**

IEC Type	IEC Content	Dissemination	Mechanism
Advisory	bit.ly/NPCCHH advisory	March	By email to DNO for further dissemination to health facilities
Early Warning	Daily heat bulletin from IMD with health impact information	March -July	<ul style="list-style-type: none"> • Digital display of temperatures on public places and health facilities • Newspaper • Health department/other government website/application
Posters	<ul style="list-style-type: none"> • Posters on heat and health impacts (English) bit.ly/NPCCHHIEC • Posters on heat and health impacts (Mizo) 	February-March	<ul style="list-style-type: none"> • Printing for state-level dissemination at health facilities, public places/buildings • District to collect the materials for dissemination to health facilities, schools and other public/government buildings
Wall painting	Using available materials	February-March	In selected schools and colleges
Hoarding	Posters in Mizo	March	To be planned with AMC

Audio-Visual	<ul style="list-style-type: none"> • 3 Audio Jingles bit.ly/NPCCHHIEC • Audio Jingle (Mizo) 	March	Played 3 times a day during between March-July
	<ul style="list-style-type: none"> • 2 Video messages (English) bit.ly/NPCCHHIEC • Video message (Mizo) 	March	Played 3 times a day during between March-July
Bus painting	Using available material	March – April	With JDOP and ACBOA
Digital display	<ul style="list-style-type: none"> • Available GIF • Above mentioned video messages 	March-July	Display in health facilities Public digital display boards in major cities
Social media	All above material + Relevant activity updates	February-July	<ul style="list-style-type: none"> • Facebook and Twitter handle of state NPCCHH, NHM • WhatsApp groups (State DNO, Health facility group)

iii) Preparatory work for IEC dissemination:

IEC Activities	Timeline
<ul style="list-style-type: none"> • Language translation • Printing • Spot booking 	Ongoing

iv) Observance of important environment-health days

Although there is no specific day on heat-health, observance of following days may be recommended for awareness on health impact of extreme heat (outdoor-indoor).

Day	Activities
<ul style="list-style-type: none"> • World Forest Day (March 21) • World water Day (March 22) • World Health Day (April 7) • Earth Day (April 22) • World Environment Day (June 5) 	Day Observation at Health & Wellness Centres. IEC Campaigns <ul style="list-style-type: none"> • Audio-video spots broadcasting • Targeted awareness sessions: traffic police, schools, women, children • Street plays and local cultural activities, Rallies

<ul style="list-style-type: none"> • World Day to combat Desertification and Drought (June 17) 	<ul style="list-style-type: none"> • Sports events • Competition: poster, poem/essay, quiz <p>Community level heat mitigation measures</p> <ul style="list-style-type: none"> • Plantation drive • Cool-roofing drive • Energy conservation Health facility level activities • Health facility-based patient awareness sessions • Energy audit and conservation measures • Review of preparedness for heat-related illness
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C. Capacity Building Activities

i) Training material

Guidelines:

- National Action Plan on Heat Related Illnesses (<https://bit.ly/NAPHRI>)

Training modules: (available bit.ly/NPCCHHguidelines shortly)

- State-District level training modules
- Medical officer training
- Para medical officers & Health care workers
- Community level training: vulnerable population group such as women/ children/ elderly/different type occupations

Other training resources: NPCCHH channel <https://bit.ly/NPCCHHyt>

- Clinical Aspects of Heat-Related Illnesses
- Webinars on heatwave and its health impact
- Day Activities on Heat-Health
- HRI surveillance training

Clinical management of HRI

- As per the treatment protocol in the National Action Plan on Heat Related Illnesses

ii) Targeted districts or population: All 9 districts of Mizoram (Aizawl East, Aizawl West, Champhai, Kolasib, Lawngtlai, Lunglei, Mamit, Serchhip & Siaha Districts)

iii) Annual training plan for Heat and Health under NPCCHH, Mizoram

Training of the different levels of health care staff on the different topics of air pollution, heat related illnesses, vector borne diseases and disaster will be combined cadre wise.

Participants	Trainer	Topics	Timeline
District level (DNO-CC, Trainers)	State Level Trainers SNO-CC, Consultant	Heat-health impact, prevention measures - Surveillance reporting and analysis with weather parameters - Health facility preparedness	February
Health facility level (MO of DH/SDH/CHC/PHC)	District Level Trainers DNO-CC	Heat-health impact, prevention measures - Surveillance case identification and reporting - Health facility preparedness - Clinical management of HRI	February
Community Health Care Workers (Health & Wellness Officer, ANM, ASHA etc)	District Level Trainers, MO	Heat-health impact prevention - Indoor and outdoor mitigation measures	February – March
VHSNC	District level trainers, MO, HWO Health care workers	Heat-health impact prevention - Indoor and outdoor mitigation measures	February - April

D. Strengthening Health Sector Preparedness

➤ National Heat-Related Illness Surveillance (NHRIS), NPCCHH

i) Surveillance guidelines and reporting formats:

National Action Plan on Heat Related Illnesses (<https://bit.ly/NAPHRI>)

Case definitions

- HRI reporting formats: health facility to state level (forms 1 to 4)
- Death investigation form for suspected heatstroke deaths

v) **Reporting units:** All health facilities in a district (PHC and above) should submit daily reports from March 1-July 31 regardless of observed temperatures and rainfall.

vi) **Surveillance training:** included under capacity building section

vii) **Surveillance activity monitoring:**

- Review of surveillance activity with DNO: every month (March-July)

➤ Revision of Health Action Plan on Heat Related Illnesses in State Action Plan on Climate Change and Human Health (SAPCCHH): The section should be revised every

year after July based on targets achieved, surveillance data, climate change impacts and health indicators with support from multisectoral task force.

➤ **Heat Action Plan for Specific Cities/Rural Districts**

Urban areas often become hotspots of heat impact due to altered land use, reduced land cover, reduced natural shade and use of built material that trap heat during day and night time. Urban heat island effect poses greater threat to larger swath of population by impeding night natural cooling leading to continuous heat stress compared to that in rural area. As such health-centric multisectoral coordinated adaptation and mitigation efforts at city level are a necessity and an opportunity not only for reducing heat impact but also for reduction of greenhouse gas emission.

City-Specific Heat-Health Action Plans are encouraged and supported by State EHC.

City-Specific Heat-Health Action Plans should include:

1. Early warning system and inter-agency emergency response plan:

- a) Analysis of historic city level all-cause mortality with observed temperatures to establish health impact-based warning and response trigger (IMD, SDMA)
- b) Daily dissemination of forecast and observed temperature during summer to public and government agencies (IMD)
- c) Identification of roles and responsibilities of coordinating agencies with activity matrix and action checklists

2. Public awareness

- a) Communicating risk to vulnerable population group

3. Capacity building of medical professionals

- a) On identification, management and reporting of HRI cases and deaths

4. Promoting short and long-term adaptation and mitigation measures

- a) Access to potable water, shaded area, cooling spaces
- b) Plantation, cool-roof.

➤ **Roles and Responsibilities**

Responsible officer	Responsibilities
SNO	Disseminate early warnings to district level <ul style="list-style-type: none">• Finalization of IEC material and dissemination Plan• Liaison with IMD for weather alerts and its dissemination• Liaison with other departments for combined IEC campaigns, coordinated

	<p>response and information sharing of health indicators for targeted action</p> <p>Organize IEC campaigns at state level on observance of important environment health days</p> <ul style="list-style-type: none"> • Organize training sessions for district level and surveillance nodal officer • Facilitate training of medical officers in clinical aspects of heat-health impact • Ensure daily surveillance reporting from district level • Ensure submission and analysis of heat related death at state and district level • Monitor daily health data with temperature and humidity levels to monitor trends and hotspots in the state • Review health facility preparedness and ambulance services to manage HRI • Identify health facilities at different levels that can have heat illness wards with necessary treatment/cooling facilities • Keep existing Rapid Response Teams under IDSP prepared to manage HRI if needed for emergency response to extreme heat • Review implementation of IEC and surveillance activities at all levels • Evaluate and update relevant section of SAPCCHH with support from State Task Force • Create organization support and strengthen Environmental Health cell to implement NPCCHH vision, Goal and Objectives • Organize sensitization workshops for other stakeholders and line departments • Organize seminars and conference to share knowledge and action under NPCCHH. • Collaborate with academic institute/s for support in updating SAPCCHH, Surveillance activity monitoring, training of health care professionals, vulnerability assessment and applied research • Submit report of activities on heat-health under NPCCHH • Advocate for reduction in source of greenhouse gas emissions
DNO	<p>Disseminate early warning to block and health facility level</p> <ul style="list-style-type: none"> • Ensure IEC dissemination to community level and facilitate community level IEC activities • Liaison with IMD to get daily observed temperature and relative humidity information • Liaison with other departments for combined IEC campaigns, coordinated response and information sharing of health indicators for targeted action • Conduct training for block health officers, medical officers, with relevant training manuals • Conduct sensitization of vulnerable groups: police officers, outdoor works, women, children etc • Organize IEC campaigns at district level on observance of important environment health days

	<ul style="list-style-type: none"> • Ensure daily reporting from health facilities and compile the data • Analyze daily health data with temperature and humidity levels to monitor trends and hotspots in district • Support timely suspected heatstroke death analysis and its reporting • Submit analyzed weekly report to SNO, NPCCHH, Hq and other departments for necessary action • Coordinate with other agencies for response • Update DAPCCHH with support from District Task Force • Submit report of activities on heat-health under NPCCHH • Advocate for reduction in source of greenhouse gas emissions
Medical officer	<p>Conduct health facility-based IEC activities</p> <ul style="list-style-type: none"> • Support community level IEC activities • Be aware of AQI levels and health impact of air pollution • Ensure necessary health facility preparedness in early diagnosis and management of cases
Health & Wellness Officer	<ul style="list-style-type: none"> • Creating awareness among the general population on issues related to Heat Related Illnesses • Stressing on importance on planting trees.
VHSNC	Conduct community level IEC activities

Health Adaptation Plan on Vector Borne Diseases (VBD)

a) Information, Education Communication (IEC) Activities

i) Targeted district or population: Aizawl, Lunglei, Lawngtlai, Siaha & Mamit districts.

• **Vulnerable groups** (Primarily children, pregnant women, older adults, immunocompromised, outdoor workers/vendors)

ii) Annual IEC dissemination plan for Vector-borne diseases in context of climate change under NPCCHH, Mizoram

IEC Type	IEC Content	Timeline	Mechanism
Poster	<ul style="list-style-type: none"> Posters on VBD and climate change (English) bit.ly/NPCCHHIEC May update posters made by state NVBDC Posters on VBD and climate change (Mizo) 	November – December	Collaborate with NVBDCP
Wall painting	Using available material	May -July Seasonally as needed	<ul style="list-style-type: none"> In selected colleges and schools In health facilities
Hoarding	Posters in Mizo	May- July Seasonally as needed	To be planned with hotspot Municipalities and district
Audio Visual	<ul style="list-style-type: none"> 3 Audio Jingles/Radio talk Audio Jingle (Mizo) 	May- July Seasonally as needed	In coordination with NVBDCP
	<ul style="list-style-type: none"> 2 Video messages (English) Video message (Mizo) 	May- July Seasonally as needed	
	<ul style="list-style-type: none"> TV spot Ads TV Discussion on VBD 	May- July Seasonally as needed	
Bus painting	Using available material	May – July Seasonally as needed	With JDOP and ACBOA

Digital display	Available GIF • Above mentioned video messages	May – July Seasonally as needed	<ul style="list-style-type: none"> • Display in health facilities • Public digital display boards in major cities
Social media	All above material + Relevant activity updates	May -July, Seasonally as needed	<ul style="list-style-type: none"> • Facebook and Twitter handle of state NPCCHH, NHM • WhatsApp group (State DNO, Health facility group)

viii) Observance of important Environment Health Days

Observance of following days may be recommended for awareness on climate change and vector-borne diseases.

Day	Activities on VBD in context of climate change
<ul style="list-style-type: none"> • World malaria day (April 25) • World mosquito day (August 20) • World Environmental Health Day (September 26) 	<p>Awareness campaign to school/NGO/CB</p> <ul style="list-style-type: none"> • Source reduction drive • Audio-video spots broadcasting • Targeted awareness sessions: urban slums, schools, women, children • Street plays and local cultural activities, Rallies • Sports events • Competition: poster, poem/essay, quiz • House to house Campaign <p>Collaborate with State NVBDCP</p>

b) Capacity Building Activities

i) Training material

Training modules: (available bit.ly/NPCCHHguidelines shortly)

- State-District level training modules
- Medical officer training
- Para medical officers & Health care workers
- Community level training: vulnerable population group such as women/

children/ elderly/different type occupations

Other training resources: NPCCHH channel <https://bit.ly/NPCCHHyt>

- Training on climate change and its impact on VBD burden

ii) Annual Training Plan for Vector Borne Diseases in context of Climate Change under NPPCCHH, Mizoram

Training Programme for	Trainer	Topics	Timeline
District Level DNO-CC	State Level Trainers SNO-CC, Consultant	<ul style="list-style-type: none"> - Role of climate change impact in VBD burden, prevention measures - Tracking of VBD and Integrating rainfall, humidity and temperature parameters with VBD surveillance - Post-disaster VBD surveillance, prevention, management 	July or after extreme weather events/natural disasters
Health Facility (MO of DH/CHC/PHC)	District Level Trainers DNO-CC	<ul style="list-style-type: none"> - Role of climate change impact in VBD burden, prevention measures - Tracking of VBD and Integrating rainfall, humidity and temperature parameters with VBD surveillance - Post-disaster VBD surveillance, prevention, management 	July-August or after extreme weather events/natural disasters
Community Health Care (Health & Wellness Officer, ANM ,ASHA etc)	District Level Trainers, MO	<ul style="list-style-type: none"> - Role of climate change impact in VBD burden, prevention measures - Post-disaster VBD surveillance, prevention, management in community and at relief camp 	
VHSNC	District level trainers, MO, HWO Health care workers	<ul style="list-style-type: none"> - Role of climate change impact in VBD burden, prevention measures 	

c) Strengthening Health Sector Preparedness

Integrate weather parameters with VBD surveillance under NVBDCP at District level

- Monitor VBD with weather parameters
- Initiate surveillance based on predicted expansion of vectors to pick up emerging foci with support from State Programme Officers (SPO) and District malaria Officers (DMO) should

i. Surveillance training: included under capacity building section

ii. VBD prevention and control measures

- **Planning** of indoor residual spray a month before peak of malaria cases based on historical data
- Management of new foci of transmission in the same way as other endemic areas.
- **Epidemic preparedness** especially after extreme weather events or natural disasters

d) Roles and responsibilities (Govt & non- Govt) in implementation of VBD activities in context of climate change under NPCCHH, Mizoram

Department/Agency	Area of Collaboration	Specifics
NVBDCP, Mizoram	Overall guidance and policy formulation	Guide and the state governments in resurgence and containment of any VBD
State Nodal Officer, Climate Change	To support the state govt. in control of VBDs particularly in climate sensitive states	Oversee vector control measures <ul style="list-style-type: none">• Oversee health sector preparedness• Oversee VBD surveillance, control in post disaster situations in community and relief camps• Train DNO, DMO• Sensitization workshops to increase awareness on climate change and its impact on VBD
India Meteorological Department	To provide meteorological data as and when required	To help the state govt. in collaboration with any research institute, in analysis of relationship between climatic factors and a particular VBD so as to forewarn the impending outbreaks.
NGO at state and district level for reach to community	Overall planning and execution of surveillance and intervention	Supervise and guide the DMOs in control of VBD

	measures to control VBDs	
State Entomologist	To provide guidance in vector control.	Generate data on fortnightly fluctuations in density of vector species so as to guide the state government in choosing appropriate time of IRS activities. To generate data on susceptibility status of disease vectors for using appropriate insecticide for IRS/larvicide for vector control
Chief Medical Officer/District Malaria Officer/Disease Surveillance officer	Execution of task assigned by the SPO	Supervise and guide surveillance and intervention measures for control of VBDs in the district
Media	To be vigilant for report of any upsurge/outbreak of any VBD.	Impart health education to masses through print and audiovisuals means

➤ **Revision of Health Action Plan on VBD in State Action Plan on Climate Change and Human Health (SAPCCHH):**

The section should be revised every year after December in collaboration with NVBDCP based on updated surveillance data, its analysis with weather parameter, prevention and control activities, targets achieved, and predicted climate variability with support from multi-sectoral task force.

Health Adaptation Plan on Extreme Weather Events and its Health Impact

Climate change can result in more hot days, resulting in more periods of ‘drought’, ‘dust storms’, or ‘heavy rains (precipitation)’, and even ‘flooding’. The health gets directly affected due to injuries, hypothermia, hyperthermia, drowning and indirectly through population dislocation, crowding, poor living conditions, faeco-oral transmission of gastro-intestinal pathogens causing water and food borne illnesses and other infectious diseases (e.g., leptospirosis, vector-borne diseases, cholera and other mental illnesses. The reason primarily is due to contamination of water and sewage disposal.

a) Information Education Communication (IEC) Activities

i) Target district/population:

- **Vulnerable districts: All the 9 districts as Mizoram**
- **Vulnerable groups** (Primarily Children, women, elderly, traffic police, outdoor workers/vendors, persons with disabilities (PWD)).

ii) Annual IEC dissemination plan for extreme weather events and their health impact under NPCCHH in Mizoram

IEC Type	Material	Timeline	Mechanism
Advisory	bit.ly/NPCCHHPrg	Seasonal	By email to DNO for further dissemination to health facilities
Early warning	Bulletins/ advisory by IMD (Drought, Flood, Cyclone, Earthquake, Landslide etc) sent by NPCCHH	Seasonal	Health department/other government website/application • Digital display of temperatures on public places and health facilities
Posters	6 posters on various Disaster and health impacts (English) bit.ly/NPCCHHIEC	Seasonal, As needed	Printing for state-level dissemination at health facilities, public places/buildings • By email to DNO for printing at district level and dissemination to health facilities, schools and other public/government buildings

Wall painting	Using available material	July-September	<ul style="list-style-type: none"> In schools and selected colleges In health facilities
Hoardings	Posters in Mizo	Seasonal, As needed	To be plan with AMC and VC
Audio Visual	Audio Jingle (Mizo)	Seasonal, As needed	Played seasonally and around relevant extreme weather events
	5 Video messages (English) bit.ly/NPCCHHIEC • Video message (Mizo)		
Bus painting	Using available material	June-July, Seasonally as needed	With JDOP and ACBOA
Digital display	5 GIF • Above mentioned video messages	Seasonal, As needed	Display in health facilities Public digital display boards in major cities
Social medial	All above material + Relevant activity updates	Seasonal, As needed	<ul style="list-style-type: none"> Facebook and Twitter handle of state NPCCHH, NHM WhatsApp groups (State DNO, Health facility group)

iii) Observance of important Health Days

Day	Activities on Disaster-Health
International Day for Disaster Risk Reduction	IEC Campaigns <ul style="list-style-type: none"> Audio-video spots broadcasting Targeted awareness sessions: women, children, occupational groups Mock drill, disaster response exercise Sports events Competition: poster, poem/essay, quiz Health facility level activities Health facility-based patient awareness sessions Conduct assessment of disaster vulnerability/energy/ water conservation measures Review of implementation of climate-resilient measures

b) Capacity Building Activities

i) Training material

Guidelines:

- National Action Plan on Disaster related Health Issues

Training modules:

- State-District level training modules
- Medical officer training
- Para medical officers & Health care workers
- Community level training: vulnerable population group such as women/ children/ elderly/ different type occupations

Other training resources: NPCCHH channel <https://bit.ly/NPCCHHyt>

ii) Annual training plan for Disaster and Health under NPCCHH, Mizoram

Training Programme	Trainer	Topics	Timeline
District -level (DNO-CC, trainers)	State ToTs	<ul style="list-style-type: none">- Climate change and impact of extreme weather events in India- Formation of disaster management committees and plans- Health facility vulnerability, resilient measures and disaster preparedness- Disaster response in coordination with state/district disaster management authority- Post-disaster health impact assessment and response	February - March
Health facility level (MO of DH/CHC/PHC)	District Level Trainers DNO-CC	<ul style="list-style-type: none">- Health facility disaster vulnerability assessment- Disaster management committee and plan- Climate resiliency measures (structural/functional)- Health facility preparedness for EWE/disaster response- Post-disaster surveillance and damage assessment	February – March

Community Health care Workers (Health & Wellness Officer, ANM Etc)	District level trainers- MO	<ul style="list-style-type: none"> - Climate change and health impact of extreme weather events - Disaster planning and response 	February - March
VHSCNCs	District level trainers, MO, Health & Wellness Officer	<ul style="list-style-type: none"> - Climate change and health impact of extreme weather events - Disaster planning and response with community participation 	February - March

c) Strengthening Health Sector Preparedness

i) **Early warning:** dissemination of early warnings for Earthquake, Landslide, Cyclone, Storm, Flood etc to health facility level and community level

ii) **Surveillance**

- Post-disaster health impact assessment
- Support post-disaster surveillance of communicable disease, health facility affected
conducted by SDMA, IDSP or other agencies

iii) **Health Facility Preparedness**

- Vulnerability assessment of health facility in context of climate change-extreme weather events
- Identify structural changes/retrofitting measures at the facility level to equip the healthcare facility
- Formalize disaster management plan and committee
- Emergency procurement arrangements & functioning of essential health services (safe water, immunization, maternal-child care etc)
- Post-disaster damage assessment and referral plan in case of health facility damage
 - Ensure routine monitoring and maintenance of support functions (Water quality, waste management)
- Establish Sustainable procurement committee

➤ **Revision of Health Action Plan on Disaster-Related Health Issues** in State Action Plan on Climate Change and Human Health (SAPCCHH):

The section should be revised every year after December with support from coordinating agencies based on updated surveillance data, its analysis with weather

parameters, targets achieved, and predicted climate variability with support from multi-sectoral task force.

d) Roles & Responsibilities

	Responsibilities
SNO	<p>Disseminate early warnings to district level</p> <ul style="list-style-type: none"> • Finalization of IEC material and dissemination Plan • Formalize intersectoral coordination for disaster planning, management and response with SDMA/IMD and other response departments • Organize training of district level officers • Facilitate assessment and implement of climate resilient measures in health facilities • Review implementation of IEC, training and surveillance activities at all levels • Evaluate and update relevant section of SAPCCHH with support from State Task Force • Create organizational support and strengthen Environmental Health cell to implement NPCCHH vision, Goal and Objectives • Organize sensitization workshops for other stakeholders and line departments • Collaborate with academic institute/s for support in updating SAPCCHH, Surveillance activity monitoring, training of health care professionals, vulnerability assessment and applied research • Submit reports of activities on EWE and health under NPCCHH
DNO	<p>Disseminate early warning to block and health facility level</p> <ul style="list-style-type: none"> • Ensure IEC dissemination to community level and facilitate community level IEC activities • Organize training for block health officers and MO • Formalize intersectoral coordination for disaster planning, management and response with SDMA/IMD and other response departments • Liaison with other departments for combined IEC campaigns, coordinated response and information sharing of health indicators for targeted action • Identification and communication of Evacuation routes & relief camps • Support planning and management of health care services in relief camps • Provide necessary IEC on health and sanitation in relief camps • training for block health officers, medical officers, with relevant training manuals • Conduct sensitization of vulnerable groups: police officers, outdoor workers, women, children etc. • Organize IEC campaigns at district level on observance of important environment health days • Facilitate disaster vulnerability assessments in health facilities and maintain records of such assessment and health facility damage due to EWE

	<ul style="list-style-type: none"> • Update DAPCCHH with support from District Task Force • Submit reports of activities on EWE and health under NPCCHH
Medical Officer	<p>Conduct health facility-based IEC activities</p> <ul style="list-style-type: none"> • Support community level IEC activities • Preparation of Disaster Management Plans and hospital safety plan • Assessment of health facility in context of climate change-extreme weather events • Identifying structural changes/retrofitting measures at the facility level to equip the healthcare facility • Ensuring routine monitoring and maintenance of support functions (Water quality, waste management) • Health facility preparedness for seasonal events
Health and Wellness Officer	<p>Conduct community level IEC activities</p> <ul style="list-style-type: none"> • Ensure training of VHSNC • Organize VHSNC workshop & training of vulnerable groups • Facilitate disaster vulnerability assessment in health facilities and maintain records of such assessment and health facility damage due to disaster
VHSNC	<p>Conduct community level IEC activities</p> <ul style="list-style-type: none"> • Community involvement in planning and demonstration of measure taken before, during-after disaster

Health Adaptation Plan on Green (environmentally sustainable) and Climate Resilient infrastructure

a) Capacity building

i. Training material

Para medical officers & Health care **Guidelines:**

- National Action Plan on Green and Climate-Resilient Health Care Facilities

Training modules: (available bit.ly/NPCCHHguidelines shortly)

- State-District level training modules
- Medical officer training
- Health care workers
- Community level training: vulnerable population group

Other training resources: NPCCHH channel <https://bit.ly/NPCCHHyt>

- Clinical Aspects of Heat-Related Illnesses
- Webinars on heatwave and its health impact
- HRI surveillance training

ii. Annual training plan for Green (environmentally sustainable) and Climate Resilient Infrastructure:

Training programme for	Trainer	Topics	Timeline
District-level (DNO-CC, trainers)	State ToTs SNO-CC, Consultant	<ul style="list-style-type: none"> - Role MCRHCF in terms of climate impact - Assessments required for implementation - Coordination with supporting agencies 	October- November
Health facility-level (MO of DH, SDH, CHC, PHC)	District level trainers DNO-CC	<ul style="list-style-type: none"> - Role MCRHCF in terms of climate impact - Assessments required for implementation - Coordination with supporting agencies 	October- November
Community health care workers (Health and Wellness Officer, ANM etc)	District level trainers-MO	<ul style="list-style-type: none"> - Role MCRHCF in terms of climate impact 	October- November
VHSNCs	District level trainers-MO, Health and Wellness Officer, Healthcare workers	<ul style="list-style-type: none"> - Role MCRHCF in terms of climate impact - Assembling support for implementation 	October- November

b) Strengthening Health Sector Preparedness

i) Implementation of Climate Resilient measures at health facilities

- a. New HCF should be built in compliance with Green & Climate Resilient Infrastructural features as of updated IPHS.
- b. Existing HCF are recommended to undergo retrofitting to implement structural climate-resilient (i.e. to withstand disasters and provide continuous, quality care to the affected population post disaster) measures as per IPHS guidelines. Health facilities' vulnerability to prevalent climate change impact should be assessed to determine retrofitting the measures. For the retrofitting locally sourced and sustainable building designs and construction technologies should be considered to reduce energy requirements, carbon footprint, and cost-effectiveness.
- c. Extreme weather event specific measures (Refer: Guidelines on Green (Environmentally Sustainable) and Climate Resilient Health Care Facilities¹³, <https://bit.ly/NPCCHHIP>)
 - Flood resilient measures
 - Cooling measures

ii) Implementation Plan of Green (Environmentally-friendly and sustainable) and Climate Resilient Infrastructure considered in FY 2022-23 are as following:

Green measures -

- Energy Auditing of the Healthcare Facilities for Energy Efficiency level in the HCF- identify 2 districts - Mamit & Kolasib
- Replacement of existing non-LED lighting to LED lighting in Healthcare Facilities- identify 1 district
- Installation of Solar Panels in Healthcare Facilities– identify 2 districts
- Install Rainwater Harvesting System in Healthcare Facilities - identify 1 district
- Climate Resilient health care infrastructure (retrofitting) - identify 1 district (1PHC) – Mamit
- Guidelines for Green and Climate-Resilient Health Facilities (2023): <https://ncdc.gov.in/showfile.php?lid=959>
- Guidelines for Solar Powering Health Facilities (2023) <https://ncdc.gov.in/showfile.php?lid=960>

Sl. No	Activity	Selected District	Selected Facilities	Target	Timeline
1	Green Measures – Energy auditing	Mamit & Kolasib district	PHCs	20% of districts with 20% facilities in FY 22-23 35% of districts with 35% facilities in FY 23-24	November
2	Green Measures – Replacement of Non-LED lights with LED lights	Mamit district	PHCs	10% of districts with 10% facilities in FY 22-23 20% of districts with 20% facilities in FY 23-24	February
3	Solar Panels	Mamit & Kolasib district	PHCs	20% of districts with 5% facilities in FY 22-23 35% of districts with 10% facilities in FY 23-24	February
4	Rain Water Harvesting	Mamit district	PHCs	10% of districts with 5% facilities in FY 22-23 30% of districts with 10% facilities in FY 23-24	February
5	Climate Resilient Health Infrastructure (retrofitting)	Mamit district	1 PHC	10% of districts in FY 22-23 20% of districts in FY 23-24	February

iii) Plan of implementation of Green Measures in Healthcare Facilities 2022-2027, NPCCHH, Mizoram

Green Measures in Healthcare facilities	Units					
	2022-23	2023-24	2024-25	2025-26	2026-27	TOTAL
Replacing existing Lighting Non-LED with LED in PHC	1	1	2	2	2	8
Installing Solar panels at PHC	2	2	3	3	3	13
Installing Rainwater Harvesting System PHC	1	1	2	2	2	8
Climate Resilient Health Infrastructure (retrofitting) PHC	1	1	2	2	2	8

iv) **Monitoring and evaluation of activities should be done in-line with targets set in PIP.** Refer PIP Guidelines: <https://bit.ly/NPCCHHPIP>

v) **Roles and Responsibilities**

	Responsibilities
SNO	<ul style="list-style-type: none"> • Disseminate early warnings to district level • Finalization of IEC material and dissemination Plan • Organize training sessions for district level officers and trainers • Identify health facilities for priority implementation based on disaster and health facility vulnerability • Identify relevant state and district level nodal agencies and collaborate with them for assessment of health facilities for implementation of measures • Facilitate and monitor necessary assessments at health facility • Facilitate implementation of structural and functional measures at health facility level • Submit report of activities on heat-health under NPCCHH • Advocate for reduction in source of greenhouse gas emissions
DNO	<ul style="list-style-type: none"> • Conduct training for block health officers, medical officers, with relevant training manuals • Support conduction for following assessment at health facility level <ul style="list-style-type: none"> - Energy audit - Water audit - Disaster-vulnerability assessment • Support following functional measures at health facility level <ul style="list-style-type: none"> - Water committee - Sustainable procurement committee - Operational measures to make health facility functioning during disasters or power cut • Coordinate with other agencies for assessment and implementation of identified structural and functional measures • Update DAPCCHH with support from District Task Force • Submit report of activities on heat-health under NPCCHH
Medical Officer	<ul style="list-style-type: none"> • Conduct health facility assessment <ul style="list-style-type: none"> - Energy audit - Water audit - Disaster-vulnerability assessment • Lead following functional measures <ul style="list-style-type: none"> - Water committee - Sustainable procurement committee - Operational measures to make health facility functioning during disasters or power cut • Support community level IEC activities

	<ul style="list-style-type: none"> Identify local funding opportunities: e.g. CSR initiative, NGO funding
VHSNCs	Support retrofitting and new health facilities with local funding source and community involvement

Monitoring and Evaluation of activities under NPCCHH

In order to strengthen the IEC activities action plan of Air pollution, Heat stress, climate sensitive VBDs and EWE at District level and sub district level, monitoring and supervision will be given more importance. DNO-CC and members of DEHC to undertake periodic monitoring and supervisory visit to villages and health facilities to monitor the IEC activities, communication activities are carried out at periphery level. Monitoring will be conducted using Quarterly Progress Report, NPCCHH format. (**Annexure K**)

During their visits district officials will also assess facility level preparedness to respond to climate sensitive diseases and weather events and suggest course correction based on their observations.

The DNOCC/DEHC will compile proper quarterly reports provided by NPCCHH HQ at NCDC with photographs and send to the State; and States to share with the NPCCHH HQ.

Reports of observance of important days will be prepared separately with details and photographs and transmitted to State; State to NPCCHH.

Part III: Budget for NPCCHH, Mizoram

Proposed budget for implementation of NPCCHH activities during 2022-2027, Mizoram

Sl. No	Activities	2022-23	2023-24	2024-25	2025-26	2026-27
1	Infrastructure -Civil Works (I & C)	9.10 Lakhs	11.60 Lakhs	12.76 Lakhs	14.03 Lakhs	15.43 Lakhs
2	Capacity building Inc. Training	23.90 Lakhs	16.21 Lakhs	17.83 Lakhs	19.61 Lakhs	21.57 Lakhs
3	IEC & Printing	2.59 Lakhs	2.59 Lakhs	2.84 Lakhs	3.12 Lakhs	3.43 Lakhs
4	Planning &M & E	0.32 Lakhs	0.32 Lakhs	0.35 Lakhs	0.38 Lakhs	0.41 Lakhs
5	Surveillance, Research, Review, Evaluation (SRRE)	0.60 Lakhs	0.60 Lakhs	0.66 Lakhs	0.72 Lakhs	0.79 Lakhs
6	Others including operating costs (OOC)	NIL	NIL	0.06 Lakhs	0.09 Lakhs	0.11 Lakhs
Total		36.51	31.32	34.50	37.95	41.74

References:

- 1) Department of Environment Forest & Climate Change, Government of Mizoram, State Action Plan on Climate Change (upto 2030)
- 2) Department of Health & Family Welfare, Government of Mizoram; State Action Plan on Climate Change & Human Health, 2017
- 3) Directorate of Economics & Statistics, Government of Mizoram: Aizawl, Statistical Handbook Mizoram 2020, Standard Laser Print, Treasury Square, Aizawl, Mizoram
- 4) Health H.PIP Guidance Note. Published Online 2022: 39-66
- 5) Resilient C, Care H. National Programme on Climate Change and Human Health Guidance Note on Green (Environmentally Sustainable) & Climate Resilient Healthcare Facilities. Published online 2023:1-38
- 6) mistic.mizoram.gov.in/page/publications
- 7) Disaster Management & Rehabilitation Department, Government of Mizoram: Aizawl; Mizoram Disaster Management Plan 2021: 111

Annexure 1: DO for appointment of SNO

MIZORAM STATE HEALTH SOCIETY
STATE PROGRAMME MANAGEMENT UNIT
OFFICE OF THE MISSION DIRECTOR
NATIONAL HEALTH MISSION
MIZORAM: AIZAWL

No. A. 11011/8/2016 – NHM/MSHS (SPMU)

Dated Aizawl the 29th July, 2022.

OFFICE ORDER

For better and smooth functioning of National Health Mission, Dr B. Lalthantluanga, Assistant State Immunization Officer, Directorate of Health Services is hereby appointed as State Nodal Officer, National Programme for Climate Change & Human Health under National Health Mission with immediate effect and until further order.


29/7/22
(Dr Eric Zomawia)
Mission Director
National Health Mission
Mizoram: Aizawl

Memo No: A. 11011/8/2016 – NHM/MSHS (SPMU)

Dated Aizawl the 29th July, 2022.

Copy to:

1. Principal Director, Health & Family Welfare Dept for kind information.
2. Director of Health Services for kind information.
3. Director of Hospital & Medical Education for kind information.
4. All State Programme/Nodal Officers under NHM for kind information.
5. Person concerned.
6. Office Copy.


29/7/22
Mission Director
National Health Mission
Mizoram : Aizawl

Scanned with CamScanner

2. DO for constitution of State Environmental Cell

GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001

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NOTIFICATION

Aizawl, the 13th July, 2022

No.D.31013/2/2021-HFW (APCCHH)/156-157 : In the interest of public service, the Governor of Mizoram is pleased to reconstitute *State Environment Health Cell* on Climate Change & Human Health consisting of the following members with immediate effect and until further order-

- | | |
|---|-------------------|
| 1. State Nodal Officer, Climate Change/NPCCHH | State Focal Point |
| 2. State Consultant, Climate Change (NHM) | Member |
| 3. Public Health Manager (NUHM) | Member |
| 4. Data Entry Operator | Member |

Terms of Reference for State Environmental Health Cell:

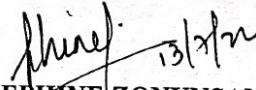
- 1) Preparation and Implementation of State Action Plan for Climate Change and Human Health
- 2) Conduct Vulnerability assessment and risk mapping for commonly occurring climate sensitive illness in the state/UT.
- 3) Assessment of needs for health care professionals (like training, capacity building) and organise trainings, workshops and meetings.
- 4) Maintain State and District level data on physical, financial, epidemiological profile for climate sensitive illness.
- 5) Ensure Convergence with NHM activities and other related programs in the State/ District
- 6) Monitor programme, Review meetings, Field observations.
- 7) Timely issue of warning/alerts to health professionals and related stakeholders as well as general public through campaign or using mass media (Electronic or printed).
- 8) Social mobilization against preventive measures through involvement of women's self-help groups, community leaders, NGOs etc.
- 9) Advocacy and public awareness through media (Street Plays, folk methods, wall paintings, hoardings etc.)
- 10) Conduction of operational research and evaluation studies for the Climate change and its impact on human health

Sd/- ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department

-2-

Memo No.D.31013/2/2021-HFW (APCCHH)/156-157 : Aizawl the 13th July, 2022
Copy to:

1. Secretary to the Governor, Mizoram
2. P.S to Chief Minister, Mizoram
3. P.S to all Ministers/Speaker, Mizoram
4. P.S to all Ministers of States/Dy. Speaker, Mizoram
5. Sr. PPS to Chief Secretary, Govt. of Mizoram
6. P.S to Secretary, Mizoram Information Commission
7. All Administrative Department
8. All Heads of Departments.
9. Principal Director, Health & Family Welfare Department
10. Director, Health Services
11. Director, Hospital & Medical Education
12. Chairman, Mizoram Pollution Control Board
13. Controller, Printing & Stationery with 6(six) spare copies for publication in the official Gazette
14. Persons concerned
15. Website Manager, Directorate of Health Services
16. Guard File.


(JOSEPHINE ZONUNSANGI)
Under Secretary to the Govt. of Mizoram,
Health & Family Welfare Department.

Annexure 2: DISTRICT ENVIRONMENTAL HEALTH CELL, MIZORAM

GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001

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NOTIFICATION

Aizawl, the 13th July, 2022

No.D.31013/2/2021-HFW (APCCHH)/160-161 : In the interest of public service, the Governor of Mizoram is pleased to constitute *District Environmental Health Cell for Climate Change and Human Health* headed by the Chief Medical Officer of each district in the state of Mizoram, consisting of the following members with immediate effect and until further order-

- | | |
|---|-------------|
| 1. District Chief Medical Officer | Unit Head |
| 2. District Nodal Officer | Focal Point |
| 3. District Microbiologist/Microbiologist, IDSP | Member |
| 4. Data Entry Operator, IDSP | Member |

Terms of Reference for District Environmental Health Cell:

- 1) Preparation and Implementation of District Action Plan for Climate Change and Human Health.
- 2) Conduct Vulnerability assessment and risk mapping for commonly occurring climate sensitive illness in the district.
- 3) Maintain and update district database of illness identified in the district.
- 4) Assess needs for health care professionals and conduct sub-district/ CHC level training/ workshop and meetings for capacity building.
- 5) Maintain District level data on physical, financial, epidemiological profile for these illnesses.

Sd/-ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department

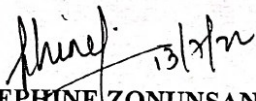
Memo No.D.31013/2/2021-HFW (APCCHH)/156-157

:

Aizawl the 13th July, 2022

Copy to:

1. Secretary to the Governor, Mizoram
2. P.S to Chief Minister, Mizoram
3. P.S to all Ministers/Speaker, Mizoram
4. P.S to all Ministers of States/Dy. Speaker, Mizoram
5. Sr. PPS to Chief Secretary, Govt. of Mizoram
6. P.S to Secretary, Mizoram Information Commission
7. All Administrative Department
8. All Heads of Departments.
9. Principal Director, Health & Family Welfare Department
10. Director, Health Services
11. Director, Hospital & Medical Education
12. Chairman, Mizoram Pollution Control Board
13. Controller, Printing & Stationery with 6(six) spare copies for publication in the official Gazette
14. Persons concerned
15. Website Manager, Directorate of Health Services
16. Guard File.


(JOSEPHINE ZONUNSANGI)
Under Secretary to the Govt. of Mizoram,
Health & Family Welfare Department.

**Annexure 3: STATE LEVEL TASK FORCE ON CLIMATE CHANGE & HUMAN HEALTH,
MIZORAM**

GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001

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NOTIFICATION

Aizawl, the 13th July, 2022

No.D.31013/2/2021-HFW (APCCHH)/154-155 : In the interest of public service and in supersession of Notification No.J.11011/37/2010-HFW dt.01.05.2018, the Governor of Mizoram is pleased to constitute *State Level Task Force on Climate Change & Human Health* under the chairmanship of the Principal Secretary, Health & Family Welfare Department, Govt. of Mizoram consisting of the following members with immediate effect and until further order-

1. Principal Secretary, Health & Family Welfare Department	Chairman
2. Mission Director, National Health Mission	Member Secretary
3. Director, Agriculture Department	Member
4. Director, Disaster Management & Rehabilitation Department	Member
5. Director, Urban Development & Poverty Alleviation Department	Member
6. Director, Science & Technology Department	Member
7. Director, Water & Sanitation Support Organization, PHED	Member
8. State Nodal Officer, NPCCHH, NHM	Co-convenor
9. State Nodal Officer, Climate Change, EF & CC Department	Member
10. Chairman, Mizoram Pollution Control Board	Member
11. Head of Department – Preventive & Social Medicine, ZMC	Member
12. Head of Department-Department of Environmental Science, MZU	Member
13. State Surveillance Officer, IDSP	Member

Terms of Reference for State Level Task Force for Climate Change & Human Health:

- 1) To provide technical guidance and recommendation to guide policy decisions related to Climate Change & Human Health.
- 2) To meet at least twice a year and as necessary to take action for drafting/reviewing/ modifications required for State Action Plan on Climate Change & Human Health (SAPCCHH).
- 3) To monitor and evaluate the implementation of SAPCCHH

Sd/- ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department

Memo No.D.31013/2/2021-HFW (APCCHH)/154-155

: Aizawl the 13th July, 2022

Copy to:

1. Secretary to the Governor, Mizoram
2. P.S to Chief Minister, Mizoram
3. P.S to all Ministers/Speaker, Mizoram
4. P.S to all Ministers of States/Dy. Speaker, Mizoram
5. Sr. PPS to Chief Secretary, Govt. of Mizoram
6. P.S to Secretary, Mizoram Information Commission
7. All Administrative Department
8. All Heads of Departments.
9. Principal Director, Health & Family Welfare Department
10. Director, Health Services
11. Director, Hospital & Medical Education
12. Chairman, Mizoram Pollution Control Board
13. Controller, Printing & Stationery with 6(six) spare copies for publication in the official Gazette
14. Person concerned
15. Website Manager, Directorate of Health Services
16. Guard File.



(JOSEPHINE ZONUNSANG)

Under Secretary to the Govt. of Mizoram,
Health & Family Welfare Department.

Annexure 4: DISTRICT LEVEL TASK FORCE, MIZORAM

GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001

...

NOTIFICATION

Aizawl, the 13th July, 2022

No.D.31013/2/2021-HFW (APCCHH)/158-159 : In the interest of public service, the Governor of Mizoram is pleased to constitute *District Level Task Force for Climate Change and Human Health* under the Chairmanship of the Deputy Commissioner of each district in the State of Mizoram, consisting of the following members with immediate effect and until further order-

1. District Deputy Commissioner	Chairman
2. District Chief Medical Officer	Member Secretary
3. District Nodal Officer, NPCCHH, NHM	Co-Convener
4. Director, Science & Technology Department	Member
5. District Head of Department, PHED	Member
6. District Head of Department, Agriculture Department	Member
7. District Head of Department, DM&R Department	Member
8. District Head of Department, UD&PA Department	Member
9. District Forest Officer, Climate Change, EF & CC Dept.	Member
10. Senior Medical Officer	Member

Terms of Reference for District Level Task Force for Climate Change & Human Health:

- 1) To provide leadership and oversight on implementation of activities under National Programme for Climate Change & Human Health (NPCCHH) and SAPCCHH.
- 2) To meet at least twice a year and as necessary, recommend necessary actions for drafting/reviewing/ modifications required for State Action Plan on Climate Change & Human Health (SAPCCHH) relevant to the district.


Sd/- ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department

Memo No.D.31013/2/2021-HFW (APCCHH)/158-159

: Aizawl the 13th July, 2022

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4. Sr. PPS to Chief Secretary, Govt. of Mizoram
5. All Administrative Departments
6. All Heads of Departments
7. All Deputy Commissioners, Mizoram
8. Principal Director, Health & Family Welfare Department
9. Director, Health Services
10. Director, Hospital & Medical Education
11. Chairman, Mizoram Pollution Control Board
12. All Chief Medical Officers, Mizoram
13. All Medical Superintendents, Mizoram
14. Controller, Printing & Stationery with 6(six) spare copies for publication in the official Gazette
15. Persons concerned
16. Website Manager, Directorate of Health Services for uploading in the department website
17. Guard File.


(JOSEPHINE ZONUNSANGI)
Under Secretary to the Govt. of Mizoram,
Health & Family Welfare Department.

Annexure 5: STATE LEVEL GOVERNING BODYS, MIZORAM

**GOVERNMENT OF MIZORAM
HEALTH & FAMILY WELFARE DEPARTMENT
MIZORAM SECRETARIAT, MINECO, AIZAWL-796001**

...

NOTIFICATION

Aizawl, the 13th July, 2022

No.D.31013/2/2021-HFW (APCCHH)/152-153 : In the interest of public service, the Governor of Mizoram is pleased to constitute *State Level Governing Body for Climate Change & Human Health* under the chairmanship of the Hon'ble Minister, Health & Family Welfare Department, Govt. of Mizoram consisting of the following members with immediate effect and until further order-

- | | |
|---|--------------------|
| 1. Hon'ble Minister, Health & Family Welfare Department | - Chairman |
| 2. Principal Secretary, Health & Family Welfare Department | - Vice Chairman |
| 3. Principal Secretary, Environment, Forests & Climate Change Dept. | - Member |
| 4. Secretary, Agriculture Department | - Member |
| 5. Secretary, Home Department | - Member |
| 6. Secretary, Disaster Management & Rehabilitation Department | - Member |
| 7. Secretary, Planning & Programme Implementation Department | - Member |
| 8. Secretary, Public Health Engineering Department | - Member |
| 9. Secretary, Urban Development & Poverty Alleviation Department | - Member |
| 10. Principal Director, Health & Family Welfare Department | - Member |
| 11. Director, Health Services, Health & Family Welfare Department | - Member |
| 12. Director, Hospital & Medical Education, Health & Family Welfare | - Member |
| 13. Mission Director, National Health Mission | - Member Secretary |
| 14. Regional Director, Health & Family Welfare, Imphal, Manipur | - Member |

Terms of reference for State Governing Body for Climate Change & Human Health:

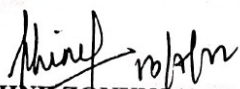
- 1) The State Governing Body for Climate Change & Human Health for the State of Mizoram will provide oversight and monitor activities being undertaken by the state for mitigation and adaptation responses for climate change and human health including National Programme on Climate Change & Human Health (NPCCHH), State Action Plan on Climate Change (Health Chapter) etc.
- 2) The Governing Body will meet at least once annually. Minutes of the annual meeting of the State Governing Body for Climate Change and Human Health will be submitted to the Central Ministry.
- 3) The Governing Body will provide policy guidance for the various mitigation measures/plans made by the state with respect to climate change & human health.
- 4) The Governing Body will support efforts to strengthen health system response to climate change as required.

Sd/- ESTHER LAL RUATKIMI
Principal Secretary to the Govt. of Mizoram
Health & Family Welfare Department

Memo No.D.31013/2/2021-HFW (APCCHH)/152-153 : Aizawl the 13th July, 2022

Copy to:

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3. P.S to all Ministers/Speaker, Mizoram
4. P.S to all Ministers of States/Dy. Speaker, Mizoram
5. Sr. PPS to Chief Secretary, Govt. of Mizoram
6. P.S to Secretary, Mizoram Information Commission
7. All Administrative Departments.
8. All Heads of Departments.
9. Principal Director, Health & Family Welfare Department
10. Director, Health Services
11. Director, Hospital & Medical Education
12. All Chief Medical Officers/Principal Medical Officer, Kulikawn, Aizawl
13. All Medical Superintendents, Mizoram
14. Controller, Printing & Stationery with 6(six) spare copies for publication in the official Gazette
15. Person concerned
17. Website Manager, Directorate of Health Services
16. Guard File.


(JOSEPHINE ZONUNSANGI)
Under Secretary to the Govt. of Mizoram,
Health & Family Welfare Department.

Annexure 6: DISTRICT NODAL OFFICERS, CLIMATE CHANGE & HUMAN HEALTH, MIZORAM

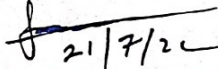
No. D.12016/1/2019-NHM/CLIMATE CHANGE
GOVERNMENT OF MIZORAM
OFFICE OF THE MISSION DIRECTOR
MIZORAM: AIZAWL

Dated Aizawl the ⁴/₂₁ July, 2022

OFFICE ORDER

For the smooth and better functioning of National Programme for Climate Change & Human Health (NPCCHH), National Health Mission, Mizoram and as desired by the Ministry of Health & Family Welfare, Government of India, the following officers have been designated as District Nodal Officers, Climate Change with immediate effect and without any financial benefit.

Sl.no	Name	Designation	District
1	Dr. Lalhlunpuii	Senior Medical Officer	Aizawl East
2	Dr. R. Lalnienga	Senior Medical Officer	Aizawl West
3	Dr. Vanzarliani	Senior Medical Officer	Champhai
4	Dr. RK Lalthlamuana	Senior Medical Officer	Kolasib
5	Dr. K Lalmachhuana	District Immunization Officer	Lunglei
6	Dr. S. Thaizi	Senior Medical Officer	Lawngtlai
7	Dr. Lalnunluangi Khiangte	Senior Medical Officer	Mamit
8	Dr. Lalngaihawmi Chhangte	District Immunization Officer	Serchhip
9	Dr. S. Vabeilysa	Senior Medical Officer	Siaha

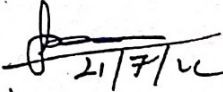

(Dr. ERIC ZOMAWIA)
Mission Director
National Health Mission
Mizoram: Aizawl

Dated Aizawl the ⁴/₂₁ July, 2022

No. D.12016/1/2019-NHM/CLIMATE CHANGE

Copy to:

1. The Principal Director, Health & Family Welfare Department for information.
2. The Director of Health Services for information.
3. The Chief Medical Officers, Aizawl East, Aizawl West, Champhai, Kolasib, Lunglei, Mamit, Serchhip, Lawngtlai & Siaha districts for information & necessary action.
4. The Concerned Senior Medical Officers / District Immunization Officers for information.
5. Office Copy.


Mission Director
National Health Mission
Mizoram: Aizawl.


Annexure 7: Contact details of SNO and DNOs, NPCCHH, Mizoram

Sl.No	Name	Designation	District	Contact details
1	Dr.B. Lalthantluanga	SNO	State	9612166240
2	Dr.R.Lalnienga	DNO	Aizawl East	8118942725
3	Dr.Walter Lalnuntluanga Sailo	DNO	Aizawl West	7005138066
4	Dr.Vanzarliani	DNO	Champhai	9436141070
5	Dr.RK.Lalthlamuana	DNO	Kolasib	8974768597
6	Dr.S.Thaizi	DNO	Lawngtlai	8974285859
7	Dr.K.Lalhmachhuana	DNO	Lunglei	9436147553
8	Dr.Lalnuntluangi Khiangte	DNO	Mamit	8974945353
9	Dr. Lallawmkimi Chhakchhuak	DNO	Serchhip	9856853895
10	Dr.S.Vabeilya	DNO	Siaha	9436148247

Annexure 8: IEC in local language on Air Pollution



Ministry of Health and
Family Welfare
Government of India





Air Pollution

I hriselna veng tha rawh

Boruak thianghlim lo hip luh hian taksa ah natna a thlen thei

Tih loh tur te

- x Halmawi, thing ro, thing hnah, thlawhhma zawh na hnu leh bawlhhlawh te hal loh tur.
- x Motor tam na hmun leh thil siam chhuah na hmunpui ah te kal loh tur.
- x Zing hma tak leh zan tlai tawh ah exercise la tur a kal chhuah loh tur.
- x Zing hma tak leh zan tlai tawh ah tukverh leh kawngkhar hawn loh tur, chhun ah ventilation hawn thawt tur (12 to 4 PM).
- x Cigarette, bidis leh vaihlo zuk loh tur.

Tih tur te

- ✓ Inehhunge ah awm tam tur. Pawn chhuah dawn in ruahman lawk thin tur.
- ✓ Thawkna dawt, chuap leh lungtha lo nei tan damdawi ei tur kaw! sa neih tur.
- Thawk lam a harsatna, luhai, khuh, thawk nuam lo leh na, mit men nuam lo neih in Doctor rawn vat tur.
- ✓ Boruak khu pe chhuak tam lo chi gas emaw electric hmang thuk hman uar tur.

www.mohfw.nic.in
www.mygov.in
www.pmindia.gov.in

YouTube mohfwindia
@MoHFW_INDIA

<http://ncdc.gov.in/>
@director_NCDC





Ministry of Health and Family Welfare
Government of India



Doctor

rawn hun turte



Luhai



Thawchham



Khuh nasa



Awmbawr na



Mit men nuam lo

www.mohfw.gov.in

Annexure 9: IEC in local language on Heat Related Illness



**NATIONAL HEALTH MISSION
MIZORAM**



Ministry of Health & Family Welfare
Government of India



National Programme
on Climate Change
and Human Health

Khawlum i tawrh daih theih nan



Tih tur te




Tulsik leh thei bul
lam chi in tam tur




Taksa khuh tam
thasam in bel tur




Nizung in a chhun bang
theih loh parda zar tur




Nisat vanglalin in
chhung ah awm tur

Tih loh tur te




Nisen sat lalin pawn
ah chhuah loh tur




Nisen sa hnualah
Inflam loh tur




Nisen sa hnualah naupang
leh ran te lirlhel chhungah
kalsem loh tur




Nisen sa hnualah zu, coffee,
thingpu, thum leh soda tam na
lam chi in loh tur




Nisen sa hnualah
airawngbawf loh tur




Nisen sa hnualah ko
lawng in kai loh tur

Inven ngai zual te





Khawlum avanga natna inhriat theih dan

Khawlum avanga natna awm theite hriain inveng tha rawh



Vun ro, sa
leh aen



Khawlik 40°C
emaw 104°F
emaw a ala sang



Luhai leh
luakchhuak



Lu na thuk thuk



Tihrawl zawi
leh aikhirh



Thawh rang
leh lungphu
rang



Anxiety, luhai,
thidang leh tlu mai
tura inhriatna

Nang emaw i bul a mite an nawmsam lohin



Tui in tam tur



Hmun deiah
hahchawh tur



Tui vawtin
inbual tur

Doctor rawn emaw Ambulance koh tur



Darker khai sia
tam ko aikhirh



Ni khaw hre lo a
tlu



Khawlik 40°C
emaw 104°F
emaw a ala sang



Awmdan nuam lo
nasa



Inven ngai zualte





Khawlum i lo tuar
daih theih nan



National Centre for
Disease Control
Government of India



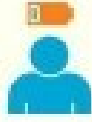
National Programme
on Climate Change
and Human Health



Khawlum avang a sahâl i ni nge COVID 19 vang zawk?



Lu na



Chauh
chhhlatna



Taksa lum



Thlan
chhuak nasa

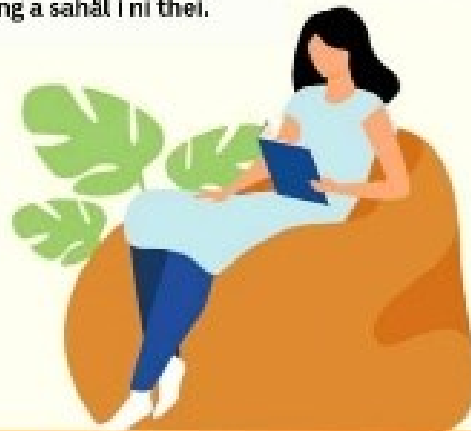


Thawchham/
Thawhah



Tha chat/aikhirh

Room dai hnuai ah minute sawmthum chhung haichawl la, chumi hnu ah i taksa lum a daih a,
zla awm lam i pan anih chuan khawlum avang a sahâl i ni thei.



I natna in zla awm lam a pan lo anih chuan doctor rawn in emaw i awm na atang
a damdawiin hnai ber pan ang che

COVID 19 lak ah
Inyeng rawh



Mask vuah
tha rawh



Kut aifai
tha rawh



In kar hlat a
awm



Vaccine lak
that

[illegible]



CHHIATRUPNA THLEN HNU A KAWTHALO LAKA INVEN DAN TUR

Nang leh i chhungte inven dan tur



Tui thianghlim chauh in tur



Kut fai taka sil tur



Tuikhur emaw tui awmna bulah emaw zun ek thiar loh tur



Ei tur chhuan so leh chhum hmin that chauh ei tur



Fai leh thianghlim taka chet tur



Tui lian tui leh bawlhhlawh emaw laka inthiarfihlim tur



Nang leh i chhungten kawthalo an
kaiin engtia tih tur nge ?

⇒ Tui thianghlim leh ORS tha taka in tur

⇒ I in atanga damdawiin hnai ber pan la, i kalkawngah ORS
leh tui thianghlim chauh in tur

⇒ Nausen kawthalo kai chu damdawiin pan a zinkawngah
nu hnute tui pek chhunzawm zel tur.



Annexure 11: Quarterly Progress Report, NPCCHH for monitoring of various activities under the programme.

Name of the State	Name of the State Nodal Officer (SNO)	Quarter Period
O.M. of appointment of State Nodal Officer	Annexed (Yes / No)	
Postal Address of State Nodal Officer:		
Phone (O)	(M)	E Mail address:
Consultant*		
No of Consultant permitted	1 or 2	
No of Consultant appointed		
O.M of appointment of Consultant	Annexed (Yes / No)	

Programme Activities /Deliverable			
1	Constitution of State Governing Body (SGB)		
A	If State Governing Body (SGB) constituted?	Yes/No	
B	If Yes, provide O.M. of constitution of SGB	Annexed (Yes / No)	
C	SGB meeting held in past quarter	Yes/No	
D	Minutes of last meeting held	Date of Meeting / /	Annexed (Yes / No)
2	Formation of State Multisectoral Task Force (SMTF)		
A	If State Multisectoral Task Force (SMTF) formed?	Yes/No	
B	If Yes, provide O.M. of constitution of SMTF	Annexed (Yes / No)	
C	SMTF meeting held in past quarter	Yes/No	
D	Minutes of last meeting held	Date of Meeting / /	Annexed (Yes / No)
3	Establishment of Environmental Health Cell (EHC)		
A	If State has established EHC ?	Yes/No	
B	If Yes, provide O.M. of establishment of EHC	Annexed (Yes / No)	
C	If Yes, provide list of members	Annexed (Yes / No)	
4	State Action Plan on Climate Change and Human Health (SAPCCHH)		
A	If State has submitted SAPCCHH?	Yes/No	
B	If Yes, version number of SAPCCHH	No:	Month/Year ____/____
5	Designated District Nodal Officer -Climate Change (DNO-CC)		
A	If State has identified DNO-CC in all districts?	Yes/No	
B	No of Districts in State/UT		
C	No of Districts appointed DNO-CC		
D	O.M. of appointment of DNO-CC's	Annexed (Yes / No), If Yes, No of Districts____	
6	Formation of District Multisectoral Task Force (DMTF)		
A	If District Multisectoral Task Force (DMTF) formed?	Yes/No	
	No of Districts appointed DTF		

B	If Yes, provide O.M. of constitution of DMTF	Annexed (Yes / No), If Yes, No of Districts ____				
C	DMTF meeting held in past quarter	Yes/No, If Yes, No of Districts ____				
D	Minutes of meeting held in past quarter	Annexed (Yes / No)		If Yes, No of Districts ____		
7	Capacity Building of State & District Nodal Officers on Climate Change					
A	Have the SNO attended the TOT?	Yes/No				
B	Have the Consultant/s attended the TOT?	Yes/No				
C	Whether the training has been conducted on Climate Change and Human Health in past quarter for	DNO -CC		Yes/No		
		Medical Officer		Yes/No		
		Health Workers		Yes/No		
D	No of health care professionals trained in past quarter on Climate change and Human Health	Health care personnel		No of trained		
		DNO -CC				
		Medical Officer				
		Health Workers				
E	Training on Air pollution	Training on Heat Related Illnesses				
	Health care personnel	No of trained	Health care personnel	No of trained		
	DNO -CC		DNO -CC			
	Medical Officer		Medical Officer			
	Health Workers		Health Workers			
F	Training on any other Climate issues	Health care personnel	No of trained			
		DNO -CC				
		Medical Officer				
		Health Workers				
G	No of Sensitization workshop/ meeting at State level on CC&HH matters in past quarter	No :	Report Annexed (Yes / No)			
H	No of Sensitization workshop/ meeting at District level on CC&HH matters in past quarter	No :	Report Annexed (Yes / No), If Yes, No _____			
I	Training of Panchayat Raj Institutions in past quarter	No of Blocks :				
		No of activities held:	Report Annexed (Yes / No), If Yes, No _____			
8	IEC in past quarter					
A	At Block level in past quarter					
	Pollution	Total No	Heat	Total No	Other Climate issues	Total No
	No of audio		No of audio		No of audio	
	No of video		No of video		No of video	
	No of social media		No of social media		No of social media	
	No of posters		No of posters		No of posters	
B	At District Level in past quarter					
	Pollution	Total No	Heat	Total No	Other Climate - issues	Total No
	No of audio		No of audio		No of audio	
	No of video		No of video		No of video	
	No of social media		No of social media		No of social media	
	No of posters		No of posters		No of posters	
C	At State level in past quarter					
	Pollution	Total No	Heat	Total No	Other Climate issues	Total No
	No of audio		No of audio		No of audio	

	No of video		No of video		No of video				
	No of social media		No of social media		No of social media				
	No of posters		No of posters		No of posters				
9	Observation of public health days related to Climate Change in past quarter								
A	World Environment Day observed?	Yes/No /Not Applicable							
	If Yes, report submitted with details	Report Annexed Yes/No							
B	International day of Clean Air and Blue Skies observed?	Yes/No/Not Applicable							
	If Yes, report submitted with details	Report Annexed Yes/No							
C	Other events observed in past quarter	YES/No							
	If Yes, report submitted with details	Report Annexed Yes/No							
10	Printing in past quarter								
A	No of Training modules printed in past quarter								
B	IEC printed								
C	Others printed	Details.. Yes/No							
C	Articles contributed to NPCCHH Newsletter for past quarter activities	Attached.. Yes /No							
11	Budget								
A	Total budget sanctioned in ROP for Financial Year (Rs in lakhs)**								
B	Total received by SNO for expenses in FY								
C	Total budget spent till the end of past quarter (Rs in lakhs)								
D	Total budget distributed to districts (for all the districts)	District 1		OM Annexed (Yes / No)					
		District 2		OM Annexed (Yes / No)					
At the State level									
	FMR code	Activities	Budget Received	Quarter I	Quarter II	Quarter III	Quarter IV	Total Expenditure	
1	3.3.3.3	Training of PRI							
2	5.1.1.2.13	Greening							
3	9.2.4.9	Training of MO's, Health workers, Programme Officer's							
4	10.2.14	Surveillance							
5	11.4.7	IEC							
6	12.17.3	Printing							
7	16.1.2.1.23	Task force Meeting							
8	16.1.2.1.24	Review of DNO-CCHH with SNO-CCHH							
9	16.4.1.5.2	Consultant-CCHH							
	Date of submission			Signature of SNO					

