Developing Monitoring & Evaluation Framework for UPSAPCC 2021-2030:Human Health Mission

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Introduction

The threat of climate change has become more and more real by every passing day. It is a challenge that humanity has to face as one and that is why international treaties like the Paris agreement 2015 and the pathway to sustainable development, as envisaged under Sustainable Development Goals (SDGs)- Agenda 2030 have been shaped.

The Indian government too had framed the the National Action Plan on Climate Change (NAPCC) of India in 2008. Over time each state has adapted these and framed their own State Action Plan on Climate Change (SAPCC) - twice, earlier in 2009 and an updated one in more recent years. In case of the state of Uttar Pradesh, this was done in 2021.

There are eight consolidated missions under the UPSAPCC 2021-2030 namely Green UP Mission, Sustainable Agriculture Mission, Jal Mission, Human Health Mission, Enhanced Energy Efficiency and Green Energy Mission, Sustainable Habitat Mission, Disaster Management Mission and Strategic Knowledge Mission.

But to successfully implement each of these missions, one needs a system to monitor and evaluate the various actions being taken under them.
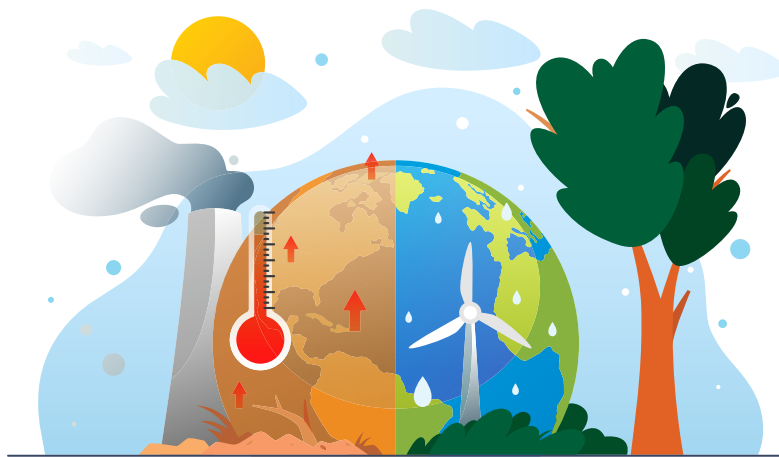
About the Human Health Mission

Climate change has a profound impact on the health of different communities. Rising temperatures and increased frequency of extreme weather events like heat and cold waves not only result in increased mortality and morbidity but also contribute to malnutrition and increased instances of diseases. Heat waves, cold waves, and floods have been recorded in UP over the years, an increase in which could potentially be damaging for the state's population. Erratic rainfall patterns because of the changing climate can affect fresh water supply, causing water scarcity. This increases the risk of water-borne diseases like diarrhoea (National Health Portal, 2019)5. This mission has three strategies and 13 action points focusing around the following key areas:

- Integrating behavioural change amongst communities including school children for building immunity
- Developing capacities for climate-linked disease forecasting

📖 An oversight of the nature of actions and strategies across the eight missions of UPSAPCC 2021-30

No	Mission	Strategies	Action Points	Adaptation	Mitigation	Both
1	Sustainable Agriculture Mission	5	19	18	-	1
2	Jal Mission	5	25	21	-	4
3	Green UP Mission	5	20	6	10	4
4	Enhanced Energy Efficiency and Green Energy Mission	6	37	1	32	4
5	Sustainable Habitat Mission	9	35	15	9	11
6	Human Health Mission	5	31	24	-	1
7	Disaster Management Mission	2	10	10	-	-
8	Strategic Knowledge Mission	4	10	10		
lk	**TOTAL**	**41**	**187**	**104**	**51**	**25**

📑 Why an M&E Framework for the revised UP SAPCC?
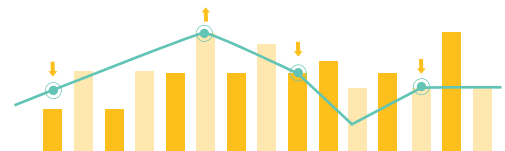
Meet the Goals

Monitoring and evaluation (M&E) frameworks are essential for ensuring that climate change action plans are effective in achieving their intended goals.

Keep track of Plans

It is crucial because it guarantees better evidence-based planning and tracking and aids in the identification of pertinent activities through the creation and operationalization of a framework.

Course Correction for the path ahead

Moreover, M&E is critical since gaps identified over time reveal mistakes, offer paths for learning and improvements, and provide opportunities to build on expertise and knowledge. A comprehensive M&E framework also allows policymakers and implementers to identify successes and challenges and make data-driven decisions to adjust their strategies accordingly.

Align with other state plans

With an eye on the goal, the metrics developed in the M&E framework also helps define roles and responsibilities better. The framework also leverages existing monitoring systems under other programmes in the state such as the UP SDG Vision 2030 and UP DEMP.

A foolproof system for the future

Once deployed, it will facilitate the creation of a data collection, flow, and management system through coordinated efforts by all relevant line departments

Vision for a dynamic Management Information System (MIS)

The M&E framework that has been developed should give way to a dynamic Management Information System (MIS) wherein data from various line departments will be collated, leading to effective monitoring of the targets set for various activities in the UP SAPCC 2.0. This system can continue to be adapted and used to for other future programmes.

The Method in brief

The M&E framework was created with the understanding that existing monitoring and data systems should be utilized rather than constructing a separate parallel data gathering mechanism. All relevant documents including the UP DEMP , UP SDG Vision 2030, NITI Aayog SDG index, and the MoSPI documents were studied along with various state and national schemes and programmes that overlap with a particular mission and the indicators within them were collated.

After this the indicators were shortlisted. As a first step only the intermediate and outcome-level indicators were shortlisted. Another criteria was whether they mapped to the strategies within a certain mission or not. Finally, the indicator or a set of indicators were chosen if they gave a holistic perspective of the strategy. Each criteria had a score attached to it and based on this scoring mechanism, the indicators were ranked and chosen.

To finalize the process, consultative workshops were held with various line departments and the indicators were further refined along with identifying or assigning the data sources for these indicators, the periodicity of their collection, who would be responsible for the job, etc.

What is notable is that some of the indicators are relevant to more than one strategy and based on this and other criteria such as data availablity, relevance to strategy/ies, holistic perspective, these indicators have been defined as high-priority or not.

How can one use this book?

This book basically compiles the different indicators that the various line departments need to gather information about in order to successfully monitor the strategies of UPSAPCC 2021-2030. The finalized list of indicators for the Human Health Mission are presented below in Table 1A.

Table 1A: Indicators for the Human Health Mission

Blue text: Vulnerability indicators (from SAPCC)	
Pink Text: These indicators are not from any current scheme since they are part of an action point, which is a recommendation for something that needs to happen in future.	
Brown Text: Indicators from NITI Aayog SDG Index 2020	
Green text: Dashboards and Reports	

S. No	Indicators(8)	Mapping to Strategy
1	Disease incidence (vector borne) · Malaria · Dengue · Leptospirosis · Scrub Typhus	1,2
2	Disease incidence (respiratory)	1,2
3	Disease incidence (water borne) · Cholera · Diarrhoea · Typhoid	1,2
4	Mortality due to Heat Related Illnesses (HRI)	1,2
5	Mortality due to cold wave	1,2
6	Percentage of households aware about protection from heat waves	3

Table 1A: Indicators for the Health Mission (Contd.)

S. No	Indicators(8)	Mapping to Strategy
7	Percentage of households aware about sources of vector borne diseases	3
8	Percentage of households adopting hand washing practices (water borne diseases)	3

One of the key ways in which the challenge of climate change can be addressed by Governments and development agencies is by reducing vulnerability. Derived from the vulernabilities listed under the chapter Climate Vulnerability Assessment" of the UPSAPCC 2021-2030, **Table 1B: Vulnerability Indicators for the Human Health Mission** , as the name suggests, highlights the vulnerability indicators most relevant for the Human Health Mission .

In **Table 2: Operationalized M & E Framework for the Human Health Mission ,** you will find a detalied look at the individucal indicators, their definitions, the strategies they have been mapped to the measurement unit, their data sources, the department or agency responsible for their collection and the period during which this has to be done. Thus this is the most comprehensive table for the indicators and offers the Operationalized M & E Framework for the Human Health Mission .

Since all these indicators have been derived from different schemes, one can refer to the schemes under **Table 3: Various State Schemes and their alignment with the Human Health Mission and its strategies**. If one is working on certain projects under UP DEMP or has to see the alignment of the indicators with a specific programme or the UP SDG Vision 2030, one can refer to the tables in the annexure online using the QR code given below.

To understand the detailed process behind these tables one can refer to **Developing Monitoring & Evaluation Framework for UPSAPCC 2021-2030 : Process Document.**

Table 1B: Vulnerability Indicators for the Human Health Mission

S. No	Indicators Selected for the M&E Framework: Human Health Mission	Functional relationship with Vulnerability
1	Disease incidence (respiratory)	Positive
2	Disease incidence (water borne)	Positive
3	Access to basic amenities (safe drinking water, sanitation, and wastewater drainage)	Negative
4	Disease incidence (vector borne)	Positive
5	Access to functional health care facilities	Negative

Reference Text for Table 2: Operationalized M &E Framework for the Human Health Mission

The Uttar Pradesh State Action Plan on Climate Change (UP SAPCC) 2021-2030 presents climate change–related mitigation and adaptation strategies to address regional and state-specific climate risks The table below puts together the operationalized M&E Framework for Human Health Mission. This Framework was developed after several rounds of deliberations and discussions between DoEFCC, GIZ and Sambodhi, and presents the final short-listed indicators for each mission in their respective booklets.

Instructions for reading the mission spreadsheet	Legends
Column 2, Indicator, presents the indicators selected for the mission.	** Indicators derived from schemes, programmes, NITI Aayog SDG Index, SAPCC Vulnerability Indicators, Dashboards and reports
Column 3, Definition, provides a definition of the indicator.	**Blue text: Vulnerability indicators (from SAPCC)**
Column 4, Mapping to Strategy, presents the strategy or strategies to which each indicator is being mapped.	**Pink Text: These indicators are not from any current scheme since they are part of an action point, which is a recommendation for something that needs to happen in future.**
Column 5, Measurement Unit, is the unit (e.g., kg, hectares, INR, number, etc.,) at which indicator is being measured.	**Brown Text: Indicators from NITI Aayog SDG Index 2020**
Column 6, Data Source, is the relevant national or state level schemes, programmes, projects, and/or dashboards mapped to the indicators [Source: secondary research].	**Green text: Dashboards and Reports**
Column 7 presents the **Department/ Agency** responsible for collecting data.	
Column 8, Periodicity, is the frequency at which data is available from the said source. Eg., Annual, bi-annual, quarterly, monthly, etc.	
Column 9, Notes, contains additional relevant information,	

Strategy 1	Assess extent of spatial spread of health risks due to current and future climate change in the state at highest possible resolution to facilitate location specific adaptation actions
Strategy 2	Enable access to data, real-time situational analysis of disease spread and establish reliable location specific short, medium and long term forecasting
Strategy 3	Enable behavioural change in public to avoid climate linked disease epidemics

Table 2: Operationalized M & E Framework for the Human Health Mission

No.	Definition	Mapping to Strategy	Measurement Unit
1 Disease incidence (vector borne) - Dengue - Malaria - Scrub typhus - Leptospirosis	Vector-borne diseases (VBD) are human illnesses caused by parasites, viruses and bacteria that are transmitted by vectors (World Health Organization). For the purposes of the SAPCC 2.0 M&E Framework, VBD such as malaria, dengue, scrub typhus and leptospirosis will be the primary focus. Distribution of VBD is determined by a complex set of demographic, environmental and social factors. Disease incidence is commonly the number of newly identified cases of a disease or condition per population at risk over a specified time frame. Disease incidence (proportion) = N/D N = (Number of new cases of dengue + malaria + scrub typhus + leptospirosis) during past one year D = Population at start of time interval Higher value means lower performance (-)	1, 2	Ratio

Data Source	Department/Agency Responsible for Data Collection	Periodicity	Notes
Department of Health & Family Welfare, Uttar Pradesh Technical Support Unit (UPTSU)	Department of Health & Family Welfare, UPTSU	Annual	Link: Definition Source: https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases https://www.ncbi.nlm.nih.gov/books/NBK430746/ Since the data will be available at block level, this will provide a spatial spread of disease incidence. Additionally, monitoring this data periodically will also provide shift in seasonality when mapped with IMD data on rainfall, temperature, AQI and humidity.

Table 2: Operationalized M & E Framework for the Human Health Mission

No.		Definition	Mapping to Strategy	Measurement Unit
2	Disease incidence (respiratory)	Disease incidence is commonly the number of newly identified cases of a disease or condition per population at risk over a specified timeframe. Disease incidence (respiratory diseases) = N/D N = Number of new cases of respiratory diseases during the past one year D = Population at start of time interval Higher value means lower performance (-)	1, 2	Ratio
3	Disease incidence (water borne) - Cholera - Diarrhoea - Typhoid	Disease incidence is commonly the number of newly identified cases of a disease or condition per population at risk over a specified timeframe. Disease incidence (water borne diseases) = N/D N = Number of new cases of (cholera + diarrhoea + Typhoid) during the past one year D = Population at start of time interval Higher value means lower performance (-)	1, 2	Ratio
4	Mortality due to heat-related illnesses (HRI)	Mortality rate is a measure of the frequency of occurrence of death in a defined population during a specified interval. (Centre for Disease Control and Prevention) Mortality due to HRI = N/D N = Number of deaths due to HRI during a year D = Total number of deaths from all causes during a year Higher value means lower performance (-)	1, 2	Ratio

Data Source	Department/Agency Responsible for Data Collection	Periodicity	Notes
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Since the data will be available at block level, this will provide a spatial spread of disease incidence. Additionally, monitoring this data periodically will also provide shift in seasonality when mapped with IMD data on rainfall, temperature, AQI and humidity.
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Since the data will be available at block level, this will provide a spatial spread of disease incidence. Additionally, monitoring this data periodically will also provide shift in seasonality when mapped with IMD data on rainfall, temperature, AQI and humidity.
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Since the data will be available at block level, this will provide a spatial spread of disease incidence. Additionally, monitoring this data periodically will also provide shift in seasonality when mapped with IMD data on rainfall, temperature, AQI and humidity.

Table 2: Operationalized M & E Framework for the Human Health Mission

No.		Definition	Mapping to Strategy	Measurement Unit
5	Mortality due to cold wave	Mortality rate is a measure of the frequency of occurrence of death in a defined population during a specified interval. (Centre for Disease Control and Prevention) Mortality due to cold wave = N/D N = Number of deaths due to cold wave during a year D = Total number of deaths from all causes during a year Higher value means lower performance (-)	1, 2	Ratio
6	Percentage of households aware about protection from heatwaves	Percentage of households aware about protection from heatwaves = X/Y * 100 X = Households aware about practices to be adopted to protect from heatwaves Y = Total number of households	3	Percentage
7	Percentage of households aware about sources of VBD	Percentage of households aware about sources of VBD = X/Y * 100 X = Households aware about sources of VBDs Y = Total number of households	3	Percentage
8	Percentage of households practising handwashing	Percentage of households practising handwashing = X/Y * 100 X = Households that practise handwashing Y = Total number of households	3	Percentage

Data Source	Department/Agency Responsible for Data Collection	Periodicity	Notes
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Since the data will be available at block level, this will provide a spatial spread of disease incidence. Additionally, monitoring this data periodically will also provide shift in seasonality when mapped with IMD data on rainfall, temperature, AQI and humidity.
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Source: Dastak Campaign
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Source: Dastak Campaign
Department of Health & Family Welfare, UPTSU	Department of Health & Family Welfare, UPTSU	Annual	Source: Dastak Campaign

Schemes for the Human Health Mission

Table 3: Various State Schemes and their alignment with the Human Health Mission and its strategies

No.	Scheme Name	Description
1	National Vector Borne Disease Control Programme (NVBDCP)	Directorate of National Vector Borne Disease Control Programme (NVBDCP) is the central nodal agency for the prevention and control of vector borne diseases in India. The programme deals with diseases like malaria, dengue, filaria, Japanese encephalitis, Kala-azar and Chikungunya. It conducts entomological studies in collaboration with zonal entomological setup of the state, drug resistance studies, cross checking of blood slides for quality control, capacity building of the states, etc.
2	Integrated Disease Surveillance Programme (IDSP)	The aim of this programme is to strengthen the disease surveillance in the country by establishing a decentralized State based surveillance system for epidemic prone diseases to detect the early warning signals, so that timely and effective public health actions can be initiated in response to health challenges in the country at the Districts, State and National level. Diseases covered include malaria, dengue, Chikungunya.
3	National Family Health Survey (NFHS)	The National Family Health Survey 2019-21 (NFHS-5), the fifth in the NFHS series, provides information on population, health, and nutrition for India and each state/union territory (UT). The main objective of each successive round of the NFHS has been to provide high-quality data on health and family welfare and emerging issues in this area.
4	Rashtriya Bal Swasthya Karyakram (RBSK)	RBSK aims to improve the overall quality of life of children enabling all children achieve their full potential; and also provide comprehensive care to all the children in the community. This program involves screening of children from birth to 18 years of age for 4 Ds- Defects at birth, Diseases, Deficiencies and Development delays, spanning 32 common health conditions for early detection and free treatment and management, including anaemia and malnutrition.
5	Rashtriya Kishor Swasthya Karyakram (RKSK)	RKSK will comprehensively address the health needs of 243 million adolescents. It introduces community-based interventions through peer educators, and is underpinned by collaborations with other ministries and state governments. Its objectives include improving nutrition and reducing anaemia among adolescents.

Geography	Timeline	Notes
National	Started in 2003-04, ongoing	
National	2004 - Ongoing	
National	Every 5 years; NFHS-5 for the period 2019-2021	
National	2014 - Ongoing	
National	2014 - Ongoing	

Table 3: Various State Schemes and their alignment with the Human Health Mission and its strategies

No.	Scheme Name	Description
6	Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)	PMSMA was launched under National Health Mission. The program aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9th of every month. This service is given in addition to the routine ANC at the health facility
7	Uttar Pradesh State Nutrition Mission (UPSNM	The Mission's objectives are to improve five nutrition outcomes over a 10-year period: prevalence of underweight, prevalence of wasting, prevalence of stunting, rates of exclusive breastfeeding and anaemia in women of reproductive age. The State Nutrition Mission will take on an advocacy and coordination role to bring together various depart- ments of the Government of Uttar Pradesh to converge efforts to improve the nutritional status of young women and children.
8	National Programme on Climate Change and Human Health (NPCCHH)	NAPCCHH was prepared in 2018 with objective to strengthen health care services against adverse impact of climate change on health. Currently the three key areas of focus for NPCCHH include air pollution, heat related illnesses and creation of green and climate resilient healthcare facilities.

Geography	Timeline	Notes
National	2016 - Ongoing	
State	2014 - 2024	
National	2018 - Ongoing	