

Uttar Pradesh State Action Plan on Climate Change: A Review from the Perspective of Women and Children

November 2017



ACKNOWLEDGEMENT

'DECEMBER 2017

Published by Climate Action Network South Asia (CANSA)
c/o Vasudha Foundation, CISRS House,
14 Jangpura B, Mathura Road, New Delhi - 110014
Website : www.cansouthasia.net
Email : info@cansouthasia.net

Available from : www.cansouthasia.net/

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Climate change is now an overwhelming global phenomenon, with its impacts being felt everywhere and in every sphere of life. Compounded with human interventions, natural disasters are getting aggravated because of intermittent rainfall, rise in temperature and humidity. These have adverse impacts at local level on livelihood, energy availability, availability of natural resources like water and on human health. Dealing with climate change is now on top of the country's developmental priority list. Long term developmental policies and plans are mostly aligned with global treaties on climate change and the negotiations based on regional and local economic requirements. In recent years, India has shown its intent in taking initiatives towards climate mitigation and adaptation measures. Regardless of the pressure of economic development, India has moved towards developing policies that encourage low carbon emission based technologies, promote alternate energy sources, provide capacity building of local community and build departmental capacities. India's commitments reflect significantly in its National Action Plan on Climate Change (NAPCC) which elaborates sector wise priority issues and mitigation/adaptation measures. It further demystifies the involvement of states and districts as the key policy framing and implementation units respectively. Launched in 2008, the NAPCC is guided by the principles of sustainable development (SD) and aligns environmental and economic objectives. It outlines a national strategy that aims to enable the country adapt to climate change and enhances the ecological sustainability of India's development path.¹

Uttar Pradesh, India's most populous state, also contributes significantly to the country's food production. Accommodating more than 200 million people, agriculture and allied sectors remain the prime sources of livelihood for the rural masses in the state. It contributes around 19 percent of total food grain production and is also home to 15 per cent of total livestock of the country. According to the erstwhile Planning Commission, around 25 percent of the state's population lives below the poverty line. These are largely the rural poor who depend on agriculture for their subsistence and are among the people worst affected by climate change.

This document attempts to analyse whether UP's State Action Plan on Climate Change (SAPCC) is sensitive enough towards issues of women and children, clearly understands their requirement and contains ample provisions to satisfy their needs. Objective of the desk review of the UPSAPCC are as follows-

- To analyse the SAPCC for current policies and provisions related to women and children
- To identify sector wise gaps and determine scope for a woman and child inclusive plan

UP is the largest state in terms of population of under-six children. As per the 2011 census, population of children under six years of age is around 29.7 million which constitutes 14.9 percent of the state's population. The state is behind many others in terms of child sex-ratio. UP has 899 girl children for every 1,000 boys. The infant death rate in UP as per SRS 2010 is 21.2 per cent. It is also an alarming fact that the female infant death rate is much higher than the male infant death rate across the country. Uttar Pradesh has the highest under-five mortality rate in the country which is 94 as per AHS 2010-11.² Female under-five children mortality rate is 99 whereas male under-five mortality rate is 90. Maternal mortality rate of the state is 285, far worse than the national average. Ill health and deaths of women and children are mostly associated with lack of nutritional diet, lack of pre and post-partum care, water borne infections and other diseases. India has been pioneering in implementing the world's largest child nutrition programme in the form of the Integrated Child Development Scheme. Initiated in 1974, the existing ICDS is a revised one which clearly signifies that state has to "address key cause and determinants of child mortality through intervention based on continuum of care, with emphasis on nutrition, safe drinking water, and sanitation and health education". The government has taken various steps to control infant and child deaths and improve their health status; it is the need of the hour to analyse and act on external factors that directly impact the sectors affecting children.

2.1: Climate change in Uttar Pradesh:

The state is quite vulnerable to natural hazards. Flood is a common phenomenon in Terai Zone, North-Eastern Zone and Mid-Plane zones. On the other hand, drought is perennial in Bundelkhand and Vindhya zones. The climate sensitivity of agriculture is very high in the state and high-level poverty, rapid urbanization coupled with flood, heat waves and cold waves makes it one of the most vulnerable areas in India. As per the projection, annual rainfall is predicted to increase by 15 per cent to 20 per cent in the 2050s as compared to the baseline and the increase is higher towards 2080s (25 per cent to 35 per cent). Inter annual variability is higher towards 2080s. There is also predicted increase in maximum temperature³ of 1.8 degrees C to 2.1 degrees C during that period.

2.2: Impact of climate change on children:

Climate change has wide-ranging impacts on humans, particularly children, who are differentially affected. The types of climate risks confronting children are diverse, ranging from direct physical impacts, such as droughts, floods, storms and extreme temperatures, to impacts on their education, psychological stress and nutritional challenges. Some of the leading killers of children worldwide are highly sensitive to climate changes (Burt, E, et al, 2013).

2.3: Impact of climate change on women:

Women commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty, and the majority of the world's poor are women. Women's unequal participation in decision-making processes and labour markets compound inequalities and often prevent women from fully contributing to climate-related planning, policy-making and implementation.⁴ Climate change impacts

² Ministry of Statistics and Program Implementation

³ State Action Plan on Climate Change-Uttar Pradesh, Page No 11

⁴ http://unfccc.int/gender_and_climate_change/items/7516.php

women's health, their nutritional status and household engagements to a great extent. They are susceptible to climate induced hazards. Being at the core of the household level responsibilities, women face most of the troubles related to food, health and livelihood. Climate change results have increased their engagements in household as well as agricultural field related works and are consequently contributing to deterioration of their health, nutritional and psycho-social status.

The table below shows the impact of climate change on five key sectors related to women's and children's development:

Climate impact indicators	<p>Changes in the pattern of rainfall often result in recurrent flood and water logging events, lead to extended days of humidity and heat waves, create drought situation in arid and semi-arid regions.</p> <p>Direct Indicators:</p> <ul style="list-style-type: none"> - Loss of soil fertility and moisture - Overall loss of availability of land for agriculture purpose - Gradual change in agriculture cycle and increased dependency on external inputs - Surface and ground water contamination and unavailability of sufficient potable water - Long spell of warm days <p>Indirect Indicators</p> <ul style="list-style-type: none"> - Loss of varieties of nutritional foods at local level - Loss of local livelihood leads to migration - Increase in work hours of women in agriculture and household level work - Migration leading to burden on urban areas - Impact on health and nutritional status of women and children - Stagnant economic growth – local to global
Impact on health	<p>-Water contamination and breakdown of sewerage systems lead to water borne diseases such as gastroenteritis and infectious diarrhoea during and after flood/water logging. It further amalgamates into psychological problems/ traumatic condition for the children and their families. Insufficient caring of children due to fragmented family leads to delayed/slow recovery which further retards proper development. Rising temperature and humidity have direct impact on women's health. Mood swings, skin related problems due to contaminated water, increase in chronic diseases such as bronchitis and asthma and increased hours in household and agriculture field contribute to deterioration in their health.</p>

Impact on nutritional status	Proper dietary nutrition helps women and children lead a healthy life. It reduces the risk of diseases, improves immune system and helps children, pregnant and lactating women to evade various infections. Nutrition has irreversible impact on health. Malnourishment or state of anaemia leads to poor immune system which further manifests into increased vulnerability of women and children to infections, weight loss and diseases. Unavailability of nutritional foods at local level compounded with intermittent supply of supplements for a longer period, especially during floods, increases vulnerability of children to malnourishment. Lack of nutritional diet causes low weight and anaemia among women, which ultimately leads to low birth weight of children and poor post-partum health of women.
Education	Schooling is one of the sectors intermingled with families' livelihood and displacement. Climate induced disasters leads to seasonal or annual migration of families. In either case, education of children gets badly affected as they are unable to continue their schooling. On the other hand, during the flood period and even the post flood period, many of the school campuses are used as shelter and storage places.
Water and sanitation	Every human being has the right to access to safe drinking water and sanitation. Climate-induced disasters severely affect the infrastructure and services related to drinking water, sanitation and hygiene. Recurrent floods and water logging inundate water sources such as tube-wells, ponds and water bodies and contaminate the natural sources of fresh water, thereby forcing affected communities to use unsafe water. It has direct impact on the health of women, older persons, the disabled and especially children who are already susceptible to diseases and infections. Toilets are generally inadequate, fragile and mostly unsuitable to withstand high floods or cyclones. Toilet-less homes and even schools leave children with no other option but to follow the unsanitary practice of open defecation.
Physical safety and protection	Disasters have long term psycho-social impacts on children. Fear of being displaced from the native place put women and children in distress. It has been proved by many studies that children suffer the most in the wake of any disaster. In case of migration of male members from the family, women and children become vulnerable to physical abuse by anti-social elements. Such cases are often under-reported due to social stigma. In many parts of Uttar Pradesh, especially in Terai and eastern plain regions close to the Nepal border, women and child trafficking are significant problems.

2.4: An overview of development of State Action Plan on Climate Change:

Uttar Pradesh is amongst the states that have developed a State Action Plan on Climate Change (SAPCC) in line with the national plan of action. The first draft of the plan was prepared in 2009 by an external agency under the supervision of Directorate of Environment, the nodal department at state level to lead the conceptualization and formulation of a climate action plan. However, this plan took almost five years to get a final shape after various rounds of consultations with government departments, expert groups and several non-government organizations working on climate mitigation and adaptation. Draft one of the plan was critically analysed and documented by GEAG and Alternative Futures in 2013 and presented before the then Principal Secretary Mr. V.N. Garg. The report had substantial deliberations on the sector wise gaps including some critical cross cutting issues like gender budgeting and disaster risk. The department had taken the report very positively as they stepped forward to initiate process of action plan review on the basis of the findings. Revised SAPCC was brought out by the department in 2014 which seems to be an improvement over the previous one.

Mission 1: Sustainable Agriculture Mission

In Uttar Pradesh, 68 percent of the population relies on agriculture for their survival. The state is a significant producer of wheat, rice, potato, sugarcane and pulses. Agriculture contribution to Gross Domestic Product is around 25 percent. The State is divided into nine agro-climatic zones based on ecological land classification. Agriculture in the country largely depends on south-west monsoon. It brings most of the rain to the state. A study reveals that land-sea thermal contrast that drives the monsoon could possibly decline in the state. There is considerable uncertainty in the change in temperature, rainfall and CO₂ level during Rabi and Kharif seasons. Such a scenario is alarming for the agriculture sector in the state. Sustainable Agriculture Mission, as the name itself reveals, focuses on making agriculture sustainable even in changing climate scenario.

The SAPCC document clearly defines the impacts of climate change in terms of declining land productivity and overall food production. The Mission covers three key areas of intervention – enhancing land productivity, increasing food production and ensuring food security even in adverse climate conditions. Key priority areas under the Agriculture Mission are:

- Establishment of climate change and agriculture cell is one of the priority areas that intends to establish weather stations for more accurate micro level data, issuing agro-climatic zone wise weather advisories, building capacities of officials of departments/ KVKs and strategies development to address climate impacts
- Concept of Climate Field schools has been conceived from the UP Diversified Agriculture Support Programme. It would be on the basis of Farmer Field School, which will support farmers to understand climate impacts on their soil, production, water and take appropriate measures
- Promotion of carbon sequestration agriculture practices and organic manure have been mentioned significantly in the mission to improve soil health. Krishi Vigyan Kendras (KVKs) are expected to adopt one village to establish climate field schools and developing it as a bio-village. The Mission has envisaged strengthening the linkage of these schemes with national flagship programmes such as National Food Security Mission (NFSM) and Rashtriya Krishi Vikas Yojna (RKVY).
- Promotion of minimum tillage or zero-tillage practices and crop-rotation methods will help improve soil health. The Mission will encourage farmer-friendly technologies such as drip and sprinkler irrigation methods, zero tillage rotavator, laser leveller etc.
- The Mission will encourage farmers to adopt diversified agro-based income sources through farming system approach. Similarly, the Mission is encouraging diversified cropping with promotion of climate stress tolerant varieties with the support of State Agriculture Universities.

- Agro forestry and climate research programmes are some of the key ingredients of the Mission's priority areas. Agro forestry is suitable for small farm land size in UP (91 per cent are small and marginal). Tree plantation at the bunds and boundaries can be beneficial for farmers in the long run.

National Initiative on Climate Resilience Agriculture (NICRA) is restricted to only a few drought and flood prone districts of Uttar Pradesh with interventions on a very small scale. The Mission has emphasized the upscaling of this intervention across the state.

Issues related to women and children in the Mission:

The Sustainable Agriculture Mission does not have any significant provisions that can impact positively on health and nutrition status of women and children. Being the prime source of livelihood, agriculture plays an important role in nutrition generation at local level. Kitchen gardens and homestead land farming have been traditionally contributing to household income and nutritional food for families. But the Mission does not cover this aspect in its priority areas. It should be promoted widely and reflected in the Mission. Having vast eco-agro variability, local level nutrition generation at household level can provide cushion to the families even in case of loss of the yield. The Mission should encourage researches on homestead land farming and promote varieties suitable to local climate and with high nutritional values. The Mission should create scope of research on the status of women farmers and must act towards making policies for women with a view to reducing climate impact. Since most of the women are engaged in agriculture activities, the Mission can work on developing women-friendly farm equipment, training programmes on technical aspects and farm extension support.

Missions 2 & 3: Solar Energy Mission & Energy Efficiency Mission in UP

Uttar Pradesh has introduced its energy policy 2009 which focuses on providing reliable, quality and affordable power to the residents of the state. Uttar Pradesh has a power deficit of 15 per cent, which is significantly higher than the national power deficit of 8.5 per cent during FY20.⁵ Fossil based energy generation in the state is contributing to carbon emissions to a great extent. The Energy Mission has focused on enhancing solar energy generation in the state and also exploring options in energy efficiency. Solar energy can do wonder in fulfilling the demand in an energy poor state like Uttar Pradesh.

Key priority areas of Solar Energy Mission are promotion of solar heating systems for public building and real estate projects, standalone solar street light systems in rural areas, solar pumps for agriculture, installing large megawatt-scale solar plant and roof top solar power generation.

The Energy Efficiency Mission in UP envisages to save energy through optimum and smart use. It advocates regular energy audits, measures to deal with transmission and distribution loss, rainwater harvesting, green buildings and plantations and star rating/BEE rating of fans, pumps, air conditioners etc.

Issues related to Women and Children in the Energy Mission:

The Energy Mission completely ignores the energy demand of critical sectors like health centres, schools, Aanganwadi centres and community centres that are directly associated with women and children. Thousands of primary and secondary schools in the state have been suffering for long due to poor energy availability. These institutions are either not electrified or receive only an intermittent supply. There are Aanganwadi centres, health sub-centres, primary and community health centres that need to be covered with regular power supplies but are facing intermittent power supply or non-connection. It is strongly recommended here that the Energy Mission should explore the possibility of identifying energy-poor institutions and promoting non-conventional sources of energy like roof top solar energy generation for households and institutions and solar cookers for mid-day meal preparation. Rain water harvesting structures can also be introduced in the proposed building of schools and health centres. Funds for installation and regular maintenance should be budgeted generously under this Mission. Smokeless solar cookers help women getting out of respiratory related issues in the long run.

Missions 4: Green Mission

Three regions in UP (Terai, Gangetic plain and Vindhya regions) are considered forest ecological zones. Forests have been the dwelling places of various species, sources of fodder and several natural resources. They help the earth's surface to cope with the warm atmosphere and maintain the ground water level. The forest cover is degrading rapidly to meet the demands of increasing human and cattle populations. There are no green buffer zones around the cities now which happened to be the eco-balancing factors for the cities. Government of UP has recognized the rapid deterioration of forest cover and initiated various programmes with the financial support of the centre and other agencies. In the Green Mission, emphasis has been laid on various activities like increase in green cover (Afforestation and Reforestation), Road side/canal side plantation, promoting agro forestry, protecting wetlands and works on protected areas, private plantations and several other community-based outreach activities.

Issues of women and children in Green Mission:

The state government recognizes the importance of participation of children but does not consider women-related issues in its mission. The Forest department's recent programme –Child Forest Programme – is designed and envisioned to impart knowledge, awareness and ownership among children on forest and climate issues and simultaneously to increase in-situ green cover in schools. Such programmes need to be formulated regularly. Separate programmes on women and children of Van Grams (Forest dwellers) can be launched for their education, health services, sanitation and hygiene.

Missions 5: Water Mission (Jal Mission)

The water sector of the state is under acute stress. In arid and semi arid regions where dependence on ground water for irrigation and drinking water is much higher than in other regions, the situation is becoming grimmer day by day due to population stress and improper maintenance of existing water sources. Drastic decline in the surface water availability in the state has aggravated this to a great extent. Many experts express their opinion that the issue of water in the state is more related to judicious management rather than scarcity. In the Water Mission, the state has committed to cover the following areas:

- The Mission has identified flood as a prominent hazard in the state and emphasized the need for infrastructural strengthening for improved cross border early warning systems and flood management.
- Identifying water scarcity as a hazard in the state, the Mission emphasizes on creating and strengthening water conservation models and restoring old water reservoirs to avoid water runoff.
- Agriculture needs maximum water and the Mission has considered this. It has explicitly mentioned improving water efficiency through promoting water efficient crops, promotion of innovative irrigation technologies and avoiding water wastage.
- Zones like Bundelkhand and Vindhya where water has been over exploited and majority of areas are in dark zone, the Mission has committed to work on improving ground water management through recharging technologies, rain water harvesting etc.
- A significant portion of the Mission focuses on drought hit areas. Ground and surface water conservation practices are significantly associated with drought management schemes. To add to that, the Mission has included soil moisture management, drought monitoring mechanism and community based water management, which seems to be quite encouraging.

Issues of women and children in the Water Mission:

The Water Mission seems to be more inclined towards water sector infrastructural and technology reforms. Most of the strategic moves are for irrigation and ground water recharging. It surprisingly has not even touched quality of drinking water. Quality and availability of potable water especially in urban areas is an upcoming threat for public health. The Mission does not even consider WHO's guidelines on drinking water quality that clearly recommends Water Safety Plans (WSPs) at various levels to ensure the safety and acceptability of drinking water supply. Combined with sanitation and hygiene, potable drinking water helps children to avoid infections and stay safe from diarrheal diseases. It is recommended that the Water Mission consider the following issues:

- Water availability and safety audits in every village including primary and secondary schools and health centres
- Making safe drinking water accessible to every woman and child who are under acute stress
- Construction of separate toilets and wash rooms for male and female children in schools
- Help community to construct toilets under Swachh Bharat Mission and encourage people, especially women and children, to use them properly
- Maintain places of delivery and post-partum care hygiene so that women do not get infections

It is also recommended that water mission should have strong collaboration with Jal Nigam/Jal Sansthan to implement water availability and quality programmes. The Mission has Rs. 12.84 crore for water quality programmes in collaboration in Jal Nigam, but the programmes are not reflected well enough in the Mission document.

Missions 6: Knowledge Mission

Objective: This Mission is envisioned to create a knowledge hub on climate change for the state. The Mission is meant to identify emerging threats of climate change in the state across various socio-economic classes, sectors, agro-climatic zones and energy sources, so that sector specific plans can be developed and implemented. Recurrent documentation of knowledge can also be used in taking remedial measures. It will help get accurate information of climate vulnerability at the micro level.

Provisions:

The Knowledge Mission is envisaged to work with four strategies which are interlinked.

Strategy 1-Knowledge Creation:

Development of comprehensive database of eight identified sectors—Meteorological, Land Surface, Hydrological, Agriculture & Livestock, Socio-Economic, Forestry & Biodiversity, Health and Energy. The Mission has identified and listed future research areas and has mentioned various academic institutions that can be engaged in research studies. The Mission has also identified and mentioned the topics of the future studies which the planners feel are essential for the state. Specific budgets have also been provided for each study. Areas of study/research are:

- Flood modelling, forecasting and downscale hazard risk and climate change projection modelling
- Impact of global warming on biodiversity – wetland and arid ecosystems
- Early warning system for livestock
- GIS based greenhouse gas inventory for transport sector in cities
- Emission estimation and impact on power sector
- Development of urban storm water flows and capacities of existing drainage systems

Children's Issues in Knowledge Mission:

The Mission has completely overlooked children's issues while listing the areas of future studies. In agro climatic areas like the north-eastern plain and the Terai zone, infant and children's deaths are highest. These regions face thousands of deaths of children every year due to Japanese Encephalitis or other diseases. Such havoc needs to be investigated from a climate change lens. However, there is too little and too vague mention of health and nutrition as key knowledge requirement under this Mission. Sectors such as education, sanitation and physical safety are completely missing. Following three studies can be undertaken under this Mission:

- Climate change impact on women and children in Uttar Pradesh (Key impacts on sectors – health, nutrition, sanitation and physical safety)
- Child mortality due to Japanese Encephalitis in Eastern UP: causes and remedial measures
- Information needs of children and adolescents on climate change and how it can be included in formal /informal sectors

In the list of information needs, women and children specific data on sanitation, education and physical safety can be mentioned to make this Mission more sensitive and inclusive. Similarly, the Mission should describe the materials and methodology recommended to be adopted for awareness generation and sharing of gained knowledge among the community and other stakeholders through the department.

Missions 7: Sustainable Habitat Mission**This Mission has three key components:**

(i) Sustainable Habitat, (ii) Sustainable Transport & (iii) Health issues. In Uttar Pradesh, 30 percent of the population resides in urban areas. The state has 703 cities including six big cities with a population of more than a million. Urban poverty is a big challenge and many migrants and dwellers in city slums are highly vulnerable to climate change impacts. They also remain in sub-optimal hygiene conditions. The population policy of Uttar Pradesh recognizes the poor health conditions of slum dwellers and inadequacy of health services for the urban poor inhabitations.⁶ The Government has formulated state population policy in all the cities to improve the health status of mothers and children living in slums and in semi-urban set ups. The Urban Health Mission, a part of the National Health Mission, envisages creating health infrastructure within the access of slum dwellers and deploying trained manpower for effective health service delivery. It aims to increase contraceptive prevalence use, control infant and child mortality and morbidity through improved demand and effective service delivery. The other key attributes of a sustainable city evolves from a proper land use plan, improved basic civic facilities, clean drinking water supply, decongested and well planned roads that address the growth of city as well as reduces congestion, drainage, sanitation, waste disposal, sewerage system, street lighting, parks, clean environment. The Sustainable Habitat Mission considers above issues in its priority sectors in following manner:

- Improving/establishing urban water supply and sewerage scheme: Only 15 cities of the state have full or partial sewerage systems. The state has launched 64 water supply projects covering 46 cities. Solid waste management programmes have been launched in 26 cities.

- Mandatory provision for every hotel, banquet hall, guest house and military and para military facility to install and use solar water heaters and rain water harvesting systems. It also provisions affordable low-cost housing and sustainable city roads
- Enforcement of energy conservation building codes through modification in building by-laws and modification in municipal codes to promote PPP based water supply, sewerage, solid waste management and affordable climate proof housing
- Creation of urban infrastructure funds for city-based interventions on transport
- The Mission has a budget for storm water drains for assessing drainage capacity and need assessment of sewerage treatment plant
- Funds for traffic reforms for less congested local transport, parking, streets etc
- Conversion of Community Health Centres (CHCs) as first referral units in climate vulnerable areas
- Control of vector-borne diseases and early warning systems
- Developing SOPs for extreme climatic events
- Integrated disease surveillance programme (IDSP)

Issues of women and children in the Sustainable Habitat Mission:

The Sustainable Habitat Mission covers urban health component quite significantly in its provisions. CHCs as first referral units, control of vector-borne diseases and IDSP are a few indicators of the Mission's sensitivity towards community health including children. However, there are certain areas where the Mission needs to look into carefully. These are:

- Making homestead and agriculture land available to landless and single women on permanent pattas
- Making all existing urban Aanganwadi Centres functional and constructing new centres wherever required
- Capacity building of Health and ICDS frontline workers on climate component, related impacts on mother and child and about referral units
- There is a provision of Rs 13,375 Crores in the Mission for a period of five years but component-based allocation is completely missing. So, it cannot be ascertained how much is allocated for health-related interventions and who is responsible.

The Sustainable Habitat Mission should explicitly examine the scope of research-based projects on public health, sanitation, drainage and urban ecosystems. Peri-urban areas, where cities are expanding should critically be reviewed to assess the availability of buffer zones for water and green cover.

3.2 Observations from SAPCC & Missions review

- Officials of health department and department of women & child development are not part of any committee, not even as members. These departments are directly linked with women and child welfare and leading various national flagship programmes in the state. Though a significant portion of the programme and budget under the Sustainable Habitat Mission is related to health, but the departments are not given any scope to implement related programmes. Principal Secretary-Health and/or Director General of Health should be a part of the committee as member.

- 'Children' are nowhere significantly mentioned in the document. They are not even placed in cross cutting issues.
- No specific budget provision is mentioned for women and children specific programmes
- More than 70 percent of total budget allocation is for climate adaptation activities but there is complete dearth of identified adaptation activities as well as areas of research
- There is no recognition of the community's local knowledge in various sectors anywhere in the document
- Despite the dominance of budget for adaptation activities, the document seems to be more inclined towards mitigation activities.

3.3 Recommendations to make SAPCC & Missions Child-centric

Mission	Recommendations
Sustainable Agriculture Mission	Having vast eco-agro variability, local level nutrition generation at household level can provide cushion to the families even in case of loss of yield. The Mission should encourage research on homestead land farming and promote varieties suitable to local climate and which have high nutritional values. Homestead land farming practices should be promoted across the state to ensure the availability of nutritional food at household level. The Mission should promote women friendly farm equipment and make them available on subsidy.
Energy Mission	It is strongly recommended that the Mission should explore the possibility of identifying energy-poor institutions such as Schools, Secondary schools, Anganwadi centres, Health Sub-centres, Primary and community health centres and promote roof top solar energy system and promotion of solar cookers for mid-day meal preparation. Rain water harvesting structures can also be introduced in new buildings for schools and health centres. Funds for the installations and regular maintenance should be available under this Mission

Green UP Mission	<p>The Child Forest Programme was designed and envisioned to impart knowledge, awareness and ownership in children on forest and climate issues and simultaneously to increase in-situ green cover in schools. Such programmes need to be formulated regularly across the state in more schools. Separate programmes on children of Van Grams (Forest community) can be launched for better education, health services, sanitation and hygiene.</p>
Water Mission	<p>The Mission should follow the WHO guideline on water safety and consider the following:</p> <ul style="list-style-type: none"> • Water availability and safety audits in every primary and secondary school • Making safe drinking water accessible to every woman and child • Construction of separate toilets and wash rooms for male and female children in schools • Strong collaboration with Jal Nigam/Jal Sansthan to implement water availability and water quality programmes <p>The Mission has provisioned Rs. 12.84 crore for water quality programmes in collaboration with Jal Nigam; this should be reflected better in the Mission's statement</p>
Strategic Knowledge Mission	<p>Following three studies can be undertaken under this Mission:</p> <ul style="list-style-type: none"> • Impact of climate change on women and children in Uttar Pradesh: Key impacts on health, nutrition, sanitation and physical safety • Child mortality due to Japanese Encephalitis in Eastern UP: Causes and remedial measures • Information needs of children and adolescents on climate change and how can it be included in formal/informal sectors <p>In the list of information needs, women and children specific data on sanitation, education and physical safety should be mentioned to make this Mission more sensitive and inclusive. Similarly, the Mission should somewhere describe the materials and methodology to be adopted for awareness generation and sharing of gained knowledge among community and other stakeholders through the department.</p>

Sustainable Habitat Mission	<ul style="list-style-type: none"> • Making all existing urban Aanganwadi Centres functional and constructing new centres wherever required • Provision of capacity building of Health and ICDS frontline workers on climate component, related impacts on mother and child and about referral units • There is a provision of Rs. 13,375 Crore in the Mission for a period of five years but no component-based allocation. So, it cannot be ascertained how much is allocated for health-related interventions and who is responsible. <p>The Sustainable Habitat Mission should also examine the scope of research-based projects on public health, sanitation, drainage and urban ecosystems. Peri-urban areas, where cities are expanding, should be critically reviewed to assess the availability of buffer zones for water and green cover</p>
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3.4 Conclusions from SAPCC & Missions review

The Earth's climate is changing at a rapid rate, with wide-ranging effects on the environment, and on socio-economic development and related sectors. Due to climate change, more extreme weather events have increased in number and intensity and this trend is likely to accelerate. Due to their physical conditions, role and status, children and women are most vulnerable to the growing impacts of climate change. Children and women constitute over 70 per cent of the victims of climate-induced disasters. Hence a systematic and scientific approach to build children's and women's resilience to disasters is the demand of the day. India has moved towards developing climate change mitigation and adaptation policies and its commitments are reflected in the National Action Plan on Climate Change (NAPCC) which elaborates sector wise priority issues and mitigation/adaptation measures. Uttar Pradesh is not only India's most populous state, it also contributes significantly to the country's economy. A large chunk of the state's population is poor who depend on agriculture for their subsistence and are worst affected due to climate change induced disasters.

The UP-SAPCC is a comprehensive document meant to address the impacts of climate change through various missions. But the impacts of CC on children (especially those below six years) and women – which total 63 per cent of the population – have not been in focus in the state action plan. In this review, some measures have been suggested to prioritise the concerns of children and women in the SAPCC to make a positive change in the missions and to make the action plan children and women centric.

4.1 Background

Flagship programs indicate the most important developmental priorities that have significant contribution of central government. These programs are usually implemented under separate bodies or directorate governed by respective departments. Guidelines are developed by Government of India which work as directive of implementation. These programs further aim to coordinate with state-specific ongoing programs for coherence. The flagship programs that are relevant for children development are as follows-

- (i) National Health Mission- National Rural Health Mission and National Urban Health Mission
- (ii) National Food Security Mission
- (iii) National Nutrition Mission

4.2 Review

(I) National Health Mission (NHM)

National Health Mission was launched in 2012 through converging its two core sub-missions, namely, National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM).

NRHM was launched in April 2005 by Government of India. It identified 18 states where health infrastructure was quite poor and health indicators were not so encouraging, Uttar Pradesh being one of those states. Aims of the mission are-

- To provide accessible, affordable, accountable, effective and reliable primary health care, especially to poor and vulnerable sections of the population
- To improve infrastructure facilities through new establishment and architectural corrections
- To mainstream AYUSH into public health system
- To improve the service delivery through institutional intervention and fulfil the demand of community

Core focus of the mission is to reduce maternal, infant and child mortality, to reduce total fertility rate, to reduce the deaths caused by Malaria and Kalazar, to reduce the incidences of water and vector-borne diseases.

National Rural Health Mission has a structured program management system in each of the state under health department. It has separate directorate and governing body that undertake periodic reviews of the program.

National Urban Health Mission:

Recognizing the need to urban population, especially urban poor, Government of India launched National Urban Health Mission (NUHM) in 2012 and link it with NHM. NUHM also has the similar management system in place as NRHM. Both the missions have dedicated Director-level staff reporting to Managing Director of NHM and Principal

Secretary –Health. Institutional arrangement and operational guidelines in NULM is almost similar to NRHM. On every 50000 people, there is provision of Urban Primary Health Centre (UPHC). As a new addition in the mission, Urban local bodies such as Nagar Panchayat, Nagar Palika and Municipal corporations have been included as the planning units under the mission. These bodies, except municipal corporations, will develop their plan as the part of NUHM district plans. Municipal Corporations will have their separate plans as per broad norms of urban areas.

Key programs running under National Health Mission are as follows-

- RMNCH+A: Reproductive Maternal, New Born, Child and Adolescent Health
- National Disease Control Program (NDCP)
- Health Systems Strengthening

Program wise key components and scope of inclusion of climate and DRR:

Area of Intervention	Key Components	Key challenges related to climate change	Scope of Climate & DRR Integration
RMNCH+A: Reproductive Maternal, New Born, Child and Adolescent Health	This is a comprehensive package of programs covering women, infant, child and adolescent health issues under one umbrella. It has beneficiaries specific programs on nutrition, institutional deliveries, immunization, micro-nutrient supplementation and several others. Janani –Shishu Suraksha Karyakarma, Rashitriya Kishori Suraksha Karyakrama, Rashitriya Bal Swasthya Karyakrama, Rashitriya Bal Swasthya Poshan Mah, IDCF, IDSP,	<ul style="list-style-type: none"> • Changing pattern of diseases & infections in children • Increasing number of water and vector borne diseases in rural as well as urban areas • Unavailability of nutritional supplements/ Supply issues • Unavailability of proper infrastructure at local level specially at sub-center level and slum level 	Both the missions have direct convergence with ICDS, largest program in the world on maternal and child nutrition. Likewise Swachh Bharat Mission and other flagship programs are also converged in the mission. Following are the scope of climate integration in the mission - <ul style="list-style-type: none"> • Allocation of funds and conducting region wise study on climate change impact on health & nutrition of women and health

	are some of the significant programs being implemented under NHM.	infrastructure at local level specially at sub-center level and slum level	<ul style="list-style-type: none"> • Deployment of medical/paramedical staff as per requirement and Training • Assessment of heat stroke cases and plan of action for community awareness as well as treatment • Proper supply and advance procurement of nutritional supplements at ICDS centers. Advance procurement is required in flood affected areas to avoid any gap in availability to women and children
NDCP (National Disease Control Program)	NDCP is the set of various public health program that include vector-borne diseases, TB control, leprosy eradication, disease surveillance, Non communicable diseases control, mental health and blindness control program.	<ul style="list-style-type: none"> • Weak system of recording of water borne/vector borne disease incidences at local level • Lack of evidence base planning 	<ul style="list-style-type: none"> • Assessment of the level of water contamination, related health issues, identification of vulnerable water logged areas and proper planning to avoid contamination

		<ul style="list-style-type: none"> • Lack of areas specific disease prevalence facts and action plan such as Japanese Encephalitis in Eastern UP. However, government has taken some initiatives recently • Lack of trained manpower availability and poor infrastructure • Lack of community awareness on climate sensitive health issues and precautionary measures 	<ul style="list-style-type: none"> • Urban slums identification and planning of anti-larva spray during and post rains • Community awareness program using electronic, print and mass media. NGOs should be involved for BCC activities • Training of available manpower on climate and DRR components
Health Systems Strengthening	Under this component, various infrastructural interventions are performed at facilities level to ensure availability of medical and paramedical human resource, transportation facilities, drugs availability and equipment procurement	<ul style="list-style-type: none"> • Lack of trained manpower • Lack of proper infrastructure at sub-center level and poor maintenance at local level • Cold chain needs to be strengthened 	<ul style="list-style-type: none"> • Interminate power supply needs to be installed at CHC, PHC and sub-centers with proper maintenance cost • Raising plinth level of facilities located in flood prone areas

		<ul style="list-style-type: none"> • Intermittent power supply at the facility cause interruption in maintaining cold chain, data recording, 	<ul style="list-style-type: none"> • Maintenance of the existing health centers on periodic basis. Fund should be created • Deployment of manpower at vacant places and their training.
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(ii) National/State Nutrition Mission

State of Uttar Pradesh has very high rates of mal-nutrition. While ongoing programs of Health and ICDS have made efforts to address the problem of under nutrition, the results have not been very encouraging with 42 percent children under three being underweight, 52 percent stunted and 19.5 percent being wasted (NFHS-3 2005-06). The State Nutrition Mission (SNM) has been set up to accelerate GoUP's efforts to address undernutrition by providing the much needed political leadership and advocacy platform.⁷ Nutrition is directly associated with health and affects individual's capacity to lead a healthy life. It can improve or hinder overall physical and cognitive development of individuals. SNM beautifully examines and describes the reasons of malnourishment in the most backward districts of state and suggests a two-dimensional interventions covering direct nutritional support to the malnourished and strengthened the sectors that have direct stake in achieving nutritional generation and distribution. SNM suggests working on following areas-(a) Nutrition-specific and (b) Nutrition-sensitive. Nutrition-specific interventions are inclined towards providing prevention and treatment to women during pregnancy and for 2 years post birth period to newly born. It contains various sets of interventions for the women and children to minimize maternal and child mortality through nutritional and treatment support. Nutrition-sensitive interventions cover the sectors contributing to achieving the nutrition goals and help community to get timely and need based quality services.

Key feature of State Nutrition Mission: SNM does not tend to implement any program or scheme in the state but to act as an apex body to coordinate, monitor and advise on the program management. SNM is intended to manage the programs data, develop monitoring plans, advocating issues with government at various levels, keep eyes on fund utilization and undertake evidence based researches. SNM provides a detailed guideline to implementing bodies in optimal utilization of resources in a given period of time to achieve required results. Objectives of the missions revolves around followings-

- Reduce underweight prevalence in new born, infants and under-5 children

- Reduce wasting prevalence in new born, infants and under-5 children
- Promote and increase exclusive breastfeeding
- Reduce stunting prevalence among various age groups of children
- Reduce Anaemia in adolescent girls and women of reproductive age

Key programs for different population & age groups:

Program Name	Component	Age group	Departme	Impact
JSY, HBNC, FBNC, JSSK, ASHA scheme under Mission, Flexipool ICDS- ICDS Mission RI/VHND, JSY, ASHA scheme under Mission Flexi pool ICDS-ICDS Mission	Early Initiation of Breastfeeding and continue for 6 months, complimentary food initiation after 6 months	From Birth to 2 years	Health & ICDS	Reduce underweig ht, stunting & wasting
Health- RI/VHND, JSY, Diarrhea Control program, ASHA scheme under Mission Flexi pool ICDSSNP, ICDS Mission Micronutrient supplementation - IFA, Vitamin A, Zinc-ORS Nutrition Rehabilitation Centers, ASHA scheme under Mission Flexipool, referral ICDS-, ICDS Mission(Growth monitoring and Promotion, referral)	Managing and promoting safe and hygienic food practices, timely supplementati on of micronutrients	0-5 years (& beyond)	Health & ICDS	Reduce diarrheal deaths, improve health status

WIFS, RBSK ICDS-Sabla, KSY	Prevent Anemia in Adolescent girls through improved nutrition intake	10-19 years	Health & ICDS	Adolescent Anemia
JSY, JSSK, NIPI ICDSSNP, ICDS Mission	Prevent Maternal Anemia and deaths	Women of reproductive age including pregnant & lactating)	Health & ICDS	Maternal Anemia, mortality

Above programs are being implemented by health and ICDS either solely or jointly across the states by using front line workers as key program implementer. Anganwari Workers, ASHAs and ANMs are key human resources carrying the responsibility of implementing above programs and schemes at grass root level. However, looking into the number of programs and quantum of work, quality of service delivery has been an issue ever since inception. Assigned works to deliver quality services and the resources in-support of these merely meet the requirement. Issues around which departments use to struggle are procurement, storage, data recording and reporting. First and second issues are system-related whereas the latter two are related to capacity. Being the largest state and intense sufferings of climate change, state needs to add capacity-building approach to bring significant systemic change.

Convergence:

Nutrition mission has adopted multi-dimensional approach through converging various sectors such as sanitation including hand-washing, safe drinking water, strengthening food supply through Public Distribution System and covering adolescent girls with the help of education department. However, mission has not given any due space to Agriculture department or sector related mission such as National Food Security Mission (NFSM) for convergence, and instead focus is more on supplementation.

Key challenges related to women and children nutrition in the state in view of climate change and disaster:

- Increasing vulnerability to get infections and diseases
- Procurement and supply issues of micronutrients in flood prone areas
- Diminution in quality of nutritious food
- Ensuring uptake of IFA tablets in school-going children if schools are closed during cold waves, summer heat or water-logging/flooding situation
- Decreasing agriculture based nutrition support to the families due to climate stress.

Program wise key components and scope of inclusion of climate and DRR:

Area of Intervention	Key Components	Scope of Climate & DRR Integration
JSY, HBNC, FBNC, JSSK, ASHA scheme under Mission RI/VHND, JSY, ASHA-ICDS Mission Health- RI/VHND, JSY, Diarrhoea Control program, ICDS Mission Micronutrient supplementation - IFA, Vitamin A, Zinc-ORS	<p>Comprehensive package of new borne and children up to 2 years.</p> <p>Managing and promoting safe and hygienic food practices, timely supplementation of micronutrients</p>	<p>Nutrition mission is yet another step of Government of India to cover various beneficiary groups under program convergence, direct & indirect nutritional support and need based campaigns. Swachh Bharat Mission and other flagship programs are also converged in the mission. Following are the scope of climate integration in the mission-</p> <ul style="list-style-type: none"> • Timely & demand wise supply of micronutrients, advance procurement of supplements at ICDS centers. Advance procurement is required in flood affected areas or other climate stressed areas to avoid any gap in supplementation to children. Advance procurement of micronutrient for at least two months is advised before monsoon/flooding period • For proper drinking water supply, hand pumps platform can be raised in all identified ICDS centres where water inundation is inevitable • Mission should encourage periodic studies and short term surveys in climate stressed areas to assess the impact of climate stress on children's nutrition status and quality of services. • Training of front line workers and technical officers on climate and disaster aspects need to be included in the program

WIFS, RBSK ICDS- Sabla, KSY		<ul style="list-style-type: none"> • Timely & demand wise supply of micronutrients, advance procurement of supplements at ICDS centers / schools. Advance procurement is required in flood affected areas or other climate stressed areas to avoid any gap in supplementation to adolescent girls. Advance procurement of micronutrient for at least two months is advised before monsoon/flooding period • For proper drinking water supply, hand pumps platform can be raised in all identified schools/AW centres where water inundation is inevitable
JSY, JSSK, NIPI ICDSSNP, ICDS Mission		<ul style="list-style-type: none"> • Season wise nutrition package for pregnant women can be developed & introduced • Provision for study/research on impact of climate change and disaster on women's psycho-social and physical health and nutrition • Convergence with Agriculture department and train FLWs / field staff to encourage nutrition generation. An awareness campaign on 'growing nutritional food' can be launched jointly.