

# The impact of climate change on health

Posted at: 22/11/2023

## Context:

As India gets ready for the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP28), it is important to examine how climate change affects the country's health.

## Climate change and health systems in India:

1. India's inadequate health systems make our population particularly vulnerable to the impact of climate risks on health. Climate change affects health directly, causing more sickness and death. In more indirect ways, it affects nutrition, reduces working hours, and increases climate induced stress.
2. All nations during the Paris Agreement agreed to cap the rise in temperature at 1.5°C. Clearly, we have failed. The year 2023 saw the highest temperatures and heat waves in recorded history.
3. Climate emergencies — extreme heat, cyclones, floods — are expected to occur with increasing regularity. These will interfere with food security and livelihoods and sharpen health challenges.

## Double burden:

1. The double burden of morbidity that India faces from communicable and noncommunicable diseases (NCDs) will be worsened by climate change. Heat also alters the virulence of pathogens.
2. It could facilitate the growth of vectors such as mosquitoes, sandflies, ticks, and as yet unknown ones, and change the seasonality of infection through changes in their life cycle. It could also facilitate the introduction of vectors and pathogens into areas where they did not exist before, such as mosquitoes in the Himalayan States.
3. Reduced availability of food and water and the decrease in nutritional value of food increases vulnerability to diseases. Epidemics commonly occur after floods, but extended warm periods also promote the proliferation of water and foodborne pathogens and diseases.
4. Less well recognised is the impact of climate change on NCDs and mental health, both of which are poorly managed in India. Heat, physical exertion, and dehydration, a constant state for labourers, could lead to kidney injuries, which are rising in India due to uncontrolled diabetes. Chronic Obstructive Pulmonary Diseases are exacerbated by increased and extended episodes of air pollution.
5. Depression, aggravated by stress generated by the change in weather conditions, and Post Traumatic Stress Disorder (PTSD) invariably accompany a climate emergency.

## Climate change and urban India:

1. India is urbanising at a rapid pace, in an unplanned manner. Urban areas, not tempered by

urban greenery and open spaces and filled with asphalt roads and heat retaining buildings that physically block air circulation, bear the worst ill effects of climate change due to the urban heat island effect. (Urban areas are warmer than surrounding rural areas, especially at night).

2. Climate change puts further pressure on the weak urban primary health system, already suffering the ill effects of air pollution; urban planning that discourages physical activity; and work related and cultural stress.

### **Way forward: Mitigation efforts**

1. It begins with understanding the direct and indirect pathways by which climate change impacts health and assessing the burden. Currently, the health information systems are not modified to gather this data.
2. Since the impact is accentuated by socioeconomic conditions, having systems in place for social support and health services will reduce the impact.
3. We need to take interventions that focus on better urban planning, green cover, water conservation, and public health interventions will be much larger — not only for health but for many determinants of health.
4. Action to control climate change needs to happen at global, regional, and local levels. Pathways of climate change and their impact will determine the appropriate area of intervention. To achieve this, India has to recognise climate change and its impact on health as a problem that can be and needs to be addressed.

### **Conclusion:**

National, State, and local governments have to decide to act on the policy options that have been generated by research. Only when the three streams of problematisation, policy options, and political decision making come together is meaningful change likely to happen.

