LANCET COUNTDOWN: TRACKING PROGRESS ON HEALTH AND CLIMATE CHANGE

2024 CLIMATE AND HEALTH POLICY PRIORITIES FOR INDIA

This document summarises key priority areas of focus for India, supported by evidence from indicators in the 2024 report of the Lancet Countdown.

1 STRENGTHENING RESILIENCE AGAINST HEATWAVE IMPACTS

Targeted interventions to prevent heat exposure, especially among vulnerable populations, are essential. Strengthening public health systems and sector-specific cooling plans, including revised work hours, can reduce heat exposure and prevent health impacts. Additionally, there is an urgent need for financial support for sector-wide adaptation.

India has recently experienced record-breaking heatwaves. **In 2023, each person was exposed to more than 2,400 hours, the equivalent to 100 days, per year when light outdoor activity (like walking) posed at least a moderate risk of heat stress (indicator 1.1.2)**. Heatwave exposure is particularly concerning for vulnerable populations such as infants and the elderly. **From 2014-2023, each infant and adult over age 65 was exposed to an average of 7.7 and 8.4 heatwave days per year, respectively. These are 47% and 58% increases, respectively, compared to 1990-1999 (indicator 1.1.1).**

Heat exposure also has economic impacts by significantly reducing workers' labour capacity. **In 2023, 181 billion potential labour hours were lost due to heat exposure (indicator 1.1.3), resulting in a potential income loss of more than US$141 billion, with agricultural and construction workers being the most afflicted (indicator 4.1.3).** This highlights the urgent need for re-prioritization of finances and scaling financial support to implement adaptation and mitigation measures, cooling action plans and public health interventions, as the growing economic costs of inaction continue to escalate heat risks for Indian populations, particularly those at extremes of age and in high-risk occupations.

2 ADAPTING TO CLIMATE-SENSITIVE INFECTIOUS DISEASE TRANSMISSION

Enhance climate-integrated disease forecasting and surveillance to identify future vector-borne disease hotspots. Allocate financial resources for targeted vector control, public awareness campaigns and community interventions. Strengthening healthcare infrastructure for better detection and treatment of diseases like malaria and dengue is also crucial for effective adaptation.

From 2014 to 2023, climate change has substantially altered the transmission dynamics of climate-sensitive infectious diseases, which are now spreading across new geographies in India. Malaria, traditionally confined to lowlands, has spread into the Himalayan region. Dengue transmission has expanded across India, including coastal regions. This spread has been at least in part driven by increasingly favorable climatic conditions. **The transmission potential (R0) for dengue carried by *Aedes albopictus* mosquitoes increased 85% from 1951-1960 to 2014-2023, with an average R0 above one at 1.6 (indicator 1.3.1)**. The increase in environmental suitability has contributed to year-round dengue transmission, with cases peaking between September and October and declining by December.

Additionally, conditions conducive to Vibrio pathogen transmission have increased along India's coastline. From 2014-2023, **the length of coastline with conditions suitable for the transmission of Vibrio pathogens at any one time during the year was 23% greater than in 1990-1999**. In these last 10 years, **the average annual population living within 100 km from coastal waters with conditions suitable for Vibrio transmission surpassed 210 million (indicator 1.3.3)**. These trends highlight the growing influence of climate change on the spread of infectious diseases. The surge in climate-sensitive infectious diseases often results in burdening existing health systems whose current workforce and infrastructure (diagnostic and therapeutic) are often ill-equipped to meet the increasing footfall due to climate-sensitive illnesses. Enhancing capacity and resilience among healthcare workers to manage climate-sensitive illnesses, along with mobilizing necessary resources, are critical adaptive measures that must be prioritized.

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3 IMPROVING COASTAL RESILIENCE AND IMPLEMENTING FLOOD ADAPTATION PLANS

Strengthening coastal resilience through implementation of the revised Coastal Regulation guidelines and targeted interventions for protection of coastal communities. Flood adaptation plans must focus on health impacts of coastal communities with emergency preparedness response plans accounting for access to housing, nutrition and healthcare with subsequent attention on alternate livelihoods and education opportunities for the displaced communities.

India's extensive coastline, spanning over 7,500 kilometers, faces severe threats from rising sea levels driven by both natural processes and human activities. Coastal regions, such as the Sundarbans, Mumbai, Tamil Nadu, Puducherry, Kerala, Andhra Pradesh, Telangana, Odisha and parts of Gujarat, are especially vulnerable to the impacts of sea level rise. Rising temperatures and sea level rise exacerbate flooding, coastal erosion, and saline intrusion, both of which can have adverse health impacts on both rural and urban populations. Health threats include direct injury from coastal storms and floods, the spread of infectious diseases, damage to health-supporting infrastructure and sanitation, as well as food and water insecurity, all of which are interconnected and significantly impact overall health outcomes.

As of 2023, approximately 18.1 million people in India resided in areas less than one meter above sea level, heightening their risk of displacement and migration due to these health threats (indicator 2.3.3). Rising sea levels not only threaten homes and infrastructure but also intensify the pressure on communities to adapt and relocate, further compounding the socio-economic challenges in these areas, including disrupting livelihoods. Local health infrastructure must be structurally and functionally resilient during and after floods to address the health impacts on coastal communities include water-borne and food-borne diseases, nutrition -related diseases and post-traumatic stress disorders. Current national and sub-national programs in India must focus on developing decentralized flood action plans accounting for health system strengthening and community-level adaptive responses with a specific focus on vulnerable groups.

Accelerating Action

With India's growing vulnerability to climate-sensitive illnesses from exposure to heatwaves and rising flood events, existing national, sub-national and city-level programs for climate change must optimize time, resources and health workforce capacity-building to establish strong adaptive response mechanisms leveraging cross-sectoral stakeholders. Importantly, increased financial support is needed to implement these health-supporting and life-saving interventions, leveraged both through existing and new financial pathways.

For more of the latest data at a country-level on health and climate change, you can find our accompanying data sheets by scanning the QR code or visiting lancetcountdown.org

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