

Climate Change – Ahmedabad, India

Expanding Heat Resilience in Ahmedabad

Introduction

Located near the banks of the Sabarmati River, Ahmedabad is the most populous city in Gujarat. As per the 2023 projected population census, with a population of 7.6 million, Ahmedabad is the seventh most populated city in India. Known as the 'Manchester of India,' Ahmedabad has entered the list of the most heat wave-prone cities in India. For the last few years, the city has been facing the cruelest heat waves. With urbanization, economic boom, and the cutting of more trees, global warming will reportedly induce a six-fold increase in the number of heat waves in India. In 2022, the temperature refused to go below forty degrees for twenty-two days straight in the city. In 2023, Ahmedabad saw over forty cases of heat strokes and many cases of extreme heat-related ailments. India has seen maximum temperatures reach above forty-five degrees for at least eight consecutive years through 2023.

About the project

India's National Disaster Management Authority (NDMA) has included extreme heat as a recognized disaster. In order to tackle the heat waves and prepare the citizens in advance, the Ahmedabad Municipal Corporation, along with the Natural Resources Defense Council (NRDC), Public Health Foundation of India (PHFI), and other partners collaborated to come up with HAP (Heat Action Plans) back in 2013.

The aim is to implement HAP across heat wave-prone cities to alert the citizens and prepare them. Twenty-three heat wave-prone states and over 130 cities have been identified for the implementation of HAP all across India. Under the plan, the top priority is to improve public awareness and alert community outreach about heat waves and heat-related health impacts. The program aims at reducing one's exposure to heat, promoting adaptive measures to tackle heat waves, strengthening heat resilience across private and public spheres, and heat issues specific capacity building among healthcare professionals.



Photograph 1: Ahmedabad City

<https://www.purpleelephantreality.in/blog/ahmedabad-city-how-it-is-growing-key-growth-vertical-of-the-city-why>

Project implementation

Heat waves hit the lower economic groups the hardest. Along with preparing the citizens and alerting communities regarding the same, more than 7,000 cool roofs have been painted for low-income households in cities like Bhopal, Surat, Jodhpur, Ahmedabad, etc. Thirteen thousand five hundred eighty-seven households and 67,935 individuals have been made aware of the benefits of solar reflective paints and the concept of cool roofs.

Monitoring, Evaluation, and Management

The development, evaluation, and implementation cost of HAP are included in the Municipal Corporation's budgetary allocations. The cost of infrastructure, capacity building, and personnel

being shared get broken up over multiple years. With each passing summer season, the efficacy of the heat action plan with its processes, outcomes, and impacts get assessed by the city or the state. Stakeholders come into play and identify the improvement, modulations, and changes required. It is imperative for the program and the action plan to be updated with each passing heat season. The participants and facilitators are made aware of the same. Various departments identify and monitor problems before they culminate into something big.

Learnings and scalability

Schools are teaching the HAP model to teachers and students. Frontline communities have come together for better outreach of the programs and demonstrations to lower-income areas. There is continuous and better engagement between civil society partners and technical experts for research, analysis, and training. The easy access and availability of HAP boost faster scalability to the heat-prone states and cities of the country.

Challenges Addressed

Some of the issues experienced and addressed through the HAP:

- HAP focuses on the drastic and seasonal shifts in climate such as extreme heat, heatwave, frequency, and intensity of heat periods.
- More focus on vulnerable communities as they face the most impact of heat exposure due to a lack of capacity to handle it or due to financial needs.
- Actions are taken for better coordination to strengthen heat resilience and city-to-city learning.

Impact

Since its launch of South Asia's first HAP in Ahmedabad in 2013, the city has reportedly been able to prevent more than 1,100 deaths in subsequent heat waves. 6.4 million lives have been positively impacted by the Heat Action Plan. The Ahmedabad HAP is a leading example of urban heat adaptation in the Intergovernmental Panel on Climate Change Working Group II (IPCC) report on climate impacts and adaptation.