Data: The Missing Link to Solving Air Pollution

Center for Study of Science, Technology and Policy
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By, Communication & Policy Engagement Team, CSTEP.

The India Clean Air Summit (ICAS), CSTEP's flagship event on air pollution, was envisaged as a platform to consolidate the latest findings, solutions, and concepts on air pollution. The summit aims to bring scientists, researchers, policymakers, and communicators under one roof to discuss and find informed and implementable solutions to improve our air quality.

It's well known that air pollution is not just a leading cause of death but also related to numerous health issues in India. Despite the prevailing concerns and increasing awareness in the past few years, India's standards or permissible level of pollutants in the atmosphere is much higher than global standards. However, in recent years, there has been a perceptible policy push towards ensuring cleaner air.

In 2018, India launched the National Clean Air Program (NCAP) — a national strategy to reduce pollution. The programme mandates city-specific action plans based on scientific assessments to identify sources of pollution. This is to target control measures specifically at the polluting sources to contain pollution.

NCAP has also helped focus attention on a crucial challenge in addressing air pollution: the lack of data. We don't have sufficient data on the causes of air pollution, kinds of pollutants, and the measure of pollutants enveloping us. The national programme also lays emphasis on scientific evidence while preparing the action plans. Many cities had not undertaken this kind of an investigation; for instance, the last such study for Bengaluru was in 2007, at least a decade before the government launched NCAP.

> *For a long time now, we haven't known exactly where the pollution originates; the pollutants are carried far and wide as the air disperses in the atmosphere.The government is keen on finding such evidence and targeting suitable action.*

In line with this approach, the Centre for Air Pollution Studies (CAPS) at CSTEP has prepared clean air action plans for the cities of Patna, Muzzafarpur, and Gaya in Bihar

by identifying source-specific control measures and conducting a techno-economic assessment of solutions for effective implementation.

Interestingly, NCAP has come at a time when there is growing awareness about pollution amongst the general citizenry, both locally and globally. There have also been numerous advancements in the technology to measure air pollution, including the popular low-cost sensors. However, low-cost sensors cannot replace high-quality reference-grade instruments. Moreover, the booming low-cost technology market has opened up a new challenge: incorrect interpretation of the data itself.

Beta-Attenuation Monitor — a reference-grade instrument installed at CSTEP's Bangalore office. BAM is available for calibrating low-cost sensors.

Increasingly, experts across the world are calling for a network of monitoring and measurement devices, across geographies. The goal is to share information on local air pollution and pollutants, their sources, and understanding how pollution produced in one place can impact another city hundreds of kilometres away. A classic example is the dangerously high pollution levels in Delhi when crop stubbles are burnt in Punjab and Haryana.

> *There needs to be a coordinated effort by the scientific and research community, as well as the broader field of practitioners in the area of air pollution — advocacy organisations and citizen groups — to work together. We hope to enable this through the summit.*

In its first year in 2019, ICAS brought together scientists, researchers, advocates, policymakers, communicators, and citizen groups — over 200 people — under one platform. The objective was to identify scientific and implementable solutions to air pollution and discuss the latest opportunities enabled by scientific and technological advances. In 2020, we look at what is clearly now at the centre of the conversation on air pollution — data.

The theme for ICAS2020 is '**Finding the Missing Evidence**'. We believe that data can provide evidence for necessary action to curb air pollution. Just like in ICAS2019, we will bring together people at the forefront of finding solutions to air pollution. But this time, keeping everyone's safety in mind, ICAS2020 will be online; you can join the discussions from the safety of your home.

COVID-19 has forced us to adapt to a dramatically changing world. During the last few months, it has also shown us numerous opportunities and the immense potential for improving the quality of our lives — especially with regard to the air we breathe. At ICAS2020, we move forward, determined in our resolve to help build a cleaner, healthier future for all.

We hope you will join us on August 25–26 from 3 pm to 6 pm. Please find details of the event here and register for talks on day one and day two.

Stay tuned for updates on the event on CSTEP's Twitter page (@CSTEP_India).

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