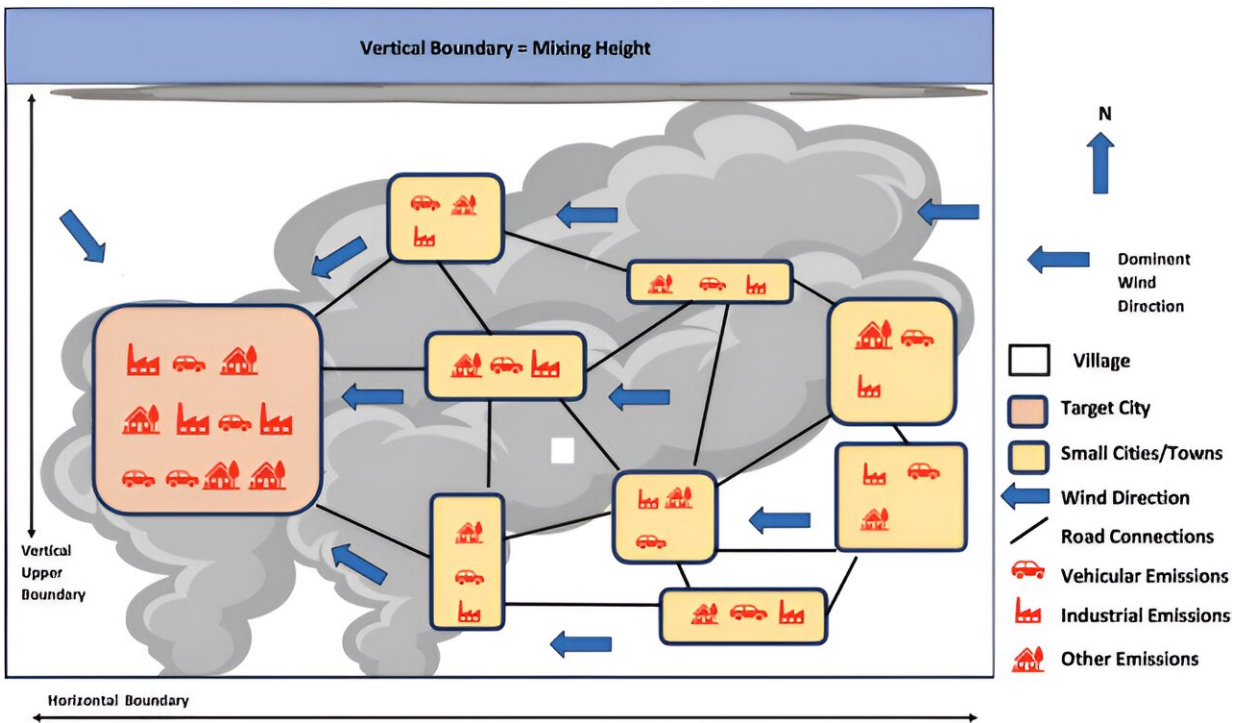


Delhi smog: India's cities must look beyond their limits to clean up air pollution

January 23 2024



Analog depiction of typical airshed. Credit: *Sustainable Horizons* (2024). DOI: 10.1016/j.horiz.2024.100090

Delhi needs the help of its rural neighbors to finally beat its killer smog problem, concludes a review carried out by the University of Surrey and regional government officials in Delhi, India. The work is [published](#) in the journal *Sustainable Horizons*.

Professor Prashant Kumar, founding director of Global Center for Clean Air Research (GCARE) at the University of Surrey, said, "Air pollution doesn't respect city boundaries—and so it must be tackled at regional level. If cities like Delhi want to avoid the lethal smog seen in recent years, they'll need neighboring [rural areas](#) to help them.

"We know this approach works—we've seen success in places like Mexico City and Los Angeles. By working together, we can tackle air pollution."

In most Indian cities (60%), the air is more than seven times more polluted than it should be. This has huge health implications.

Some of this pollution comes from neighboring rural areas—from crop burning, wood stoves, or power plants.

Yet measures to tackle urban smog usually ignore rural sources. Instead, they focus only on measures within the city limits—like boosting [public transport](#) or controlling pollution from industry and building sites.

The GCARE review recommends tackling air pollution at a regional level instead. This means identifying the wider area where a city's pollution is produced—its so-called "airshed."

GCARE makes several recommendations:

- Regional air quality plans should be drawn up—which has worked well in places like Mexico City and Los Angeles.
- "Smog forecasts" could be produced with better monitoring. Satellites could spot bonfires and other sources of [pollution](#). Scientists could then predict how it would interact with weather conditions.
- "Airshed Councils" could help local, regional and federal

agencies coordinate their efforts.

Dr. Anwar Ali Khan, senior environmental engineer on the Delhi Pollution Control Committee, said, "Delhi's neighboring States have an important role to play in helping save lives in our city—and in their areas too. We need an action plan with a sound scientific basis, and we need better monitoring. This requires cities, governments and others to work together. A joined-up approach is the only way to defeat this deadly health hazard."

Dr. Mukesh Khare, professor emeritus of civil engineering at the Indian Institute of Technology, said, "A significant portion of [air pollution](#) stems from sources outside city limits, which requires a shift from [city](#)-specific to region-specific emission reduction targets. The establishment of an airshed will be a critical tool for effective air quality management and planning."

More information: Anwar Ali Khan et al, A critical review of managing air pollution through airshed approach, *Sustainable Horizons* (2024). [DOI: 10.1016/j.horiz.2024.100090](https://doi.org/10.1016/j.horiz.2024.100090)

Provided by University of Surrey

Citation: Delhi smog: India's cities must look beyond their limits to clean up air pollution (2024, January 23) retrieved 28 April 2024 from <https://phys.org/news/2024-01-delhi-smog-india-cities-limits.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.