



## **Key recommendations from the webinar on opportunities for addressing air pollution in South Asia**

### **Introduction**

South Asia experiences some of the worst air quality in the world and is reported to host 37 of the 40 most polluted cities worldwide<sup>1</sup>. Home to over 1.85 billion people, South Asia is the world's most populated region<sup>2</sup>, comprising middle and lower-middle income countries with broadly similar pollution sources that share a regional air-shed. South Asia also encompasses a critical and sensitive global asset – the Hindu Kush Himalaya (HKH) - often referred to as the pulse of the planet, the third pole, or the water tower of Asia.

Climate change and air quality are often considered and dealt with separately by decision makers and in the wider public discourse. This has been shown to be a limiting approach as they are fundamentally interlinked with a number of common issues of concern. For example particulates and black carbon are linked to accelerated glacier and snow melt. This commonality demands collaborative, transnational and multi-sectoral mitigation efforts. It is clear that these shared problems require shared solutions.

### **Opportunities for addressing air pollution in South Asia**

On July 29th, experts from the South Asia region met virtually for a webinar titled "Opportunities for Addressing Air Pollution in South Asia". Organised by Climate Trends, a research-based consulting and capacity building initiative, and the International Centre for Integrated Mountain Development (ICIMOD)<sup>3</sup>, the webinar focused on the challenges that air pollution poses for the developing economies of South Asia, with a focus on the greater Punjab. Speakers included Dr Pema Gyamtsho, Director General, ICIMOD; Daniel Greenbaum, President, Health Effects Institute; Glynda Bathan, Deputy Executive Director, Clean Air Asia; S N Tripathi, Head of the Civil Engineering Department at Indian Institute of Technology Kanpur; Syeda Rizwana Hasan, Supreme Court lawyer and Chief Executive, Bangladesh Environmental Lawyers Association; Maheswar Rupakheti, Research Group Leader at the Institute for Advanced Sustainability Studies in Potsdam, Germany; and James J Schauer, Professor, Civil and Environmental Engineering, University of Wisconsin.

Over 90% of the world's population live in areas that exceed the thresholds and limits for key air pollutants set by the World Health Organisation. Unfortunately, for South Asia, this is approximately

---

<sup>1</sup> World Air Quality Report 2020. Region and City PM2.5 Ranking. IQAir.

<sup>2</sup> <https://cic.nyu.edu/topic/south-asia>

<sup>3</sup> [Atmosphere - ICIMOD](#)

100%.<sup>4</sup> Mitigating air pollution has multiple benefits, including in the battle with climate change, improving the agricultural sector, as part of “good” economic growth, improving mental wellbeing, addressing gender inequality, protecting human, animal and environmental health and increasing resilience in the region. Air pollution has now captured the attention of the general public, policy makers and researchers, but it is a complex problem which requires coordination, cooperation and innovation from a range of stakeholders.

### Key recommendations from the panel

- Addressing transboundary pollutants requires regional cooperation, which needs strong political will supported by an evidence and science-based approach. Institutions and stakeholders must come together to build a case for the same.
- All countries in the region must prioritize the control of in-country air pollution sources which requires domestic policy actions. There is also a need to mainstream air quality and urban development interactions at sub-national and city levels.
- Sector-specific policies are critical to make timely progress in each sector.
- Strong partnerships are required between governments, academia, industry, and community groups. This is critical for implementing and supporting social and behavioural based solutions.
- In South Asia, 61% of the population is exposed to household air pollution linked to indoor biomass burning (for cooking and heating). This model is steadily changing in countries e.g. India where the use of LPG is being promoted through the flagship Pradhan Mantri Ujjwala Yojana scheme. Preliminary studies suggest associated improvements in human health.
- Measures that could result in the reduction of PM<sub>2.5</sub> include switching to cleaner BS-VI fuel<sup>5</sup>, installing regulatory monitoring stations across all industries, sector-specific solutions (e.g., cleaner zigzag technology in brick kilns), peripheral highways to reduce traffic congestion in urban areas, and use of “happy seeders”<sup>6</sup> to tackle crop residue burning. These measures have shown early signs of successfully reducing PM<sub>2.5</sub> across the National Capital Region in India.
- National scale regulatory action with a comprehensive transnational strategy is needed when there are a wide spectrum of air pollution issues affecting all countries in the region that need to be addressed.
- Monitoring networks for air pollution must be dense enough and appropriately sensitive to meet the minimum requirement for optimum spatial coverage so that accurate area activity representative information can be generated, analysed, and disseminated. Monitoring is

---

4

<https://www.who.int/news/item/02-05-2018-9-out-of-10-people-worldwide-breathe-polluted-air-but-more-countries-are-taking-action>

5

<https://www.downtoearth.org.in/blog/air/bs-vi-standards-will-reduce-heavy-duty-vehicular-pollution-56004>

IIT Delhi's study with solutions for emission controls lists BSVI fuel as one of the measures along with source apportionment analysis - <https://cerca.iitd.ac.in/uploads/Reports/1576211826iitk.pdf>

<sup>6</sup> A happy seeder is a tractor-operated machine developed by the PAU in collaboration with Australian Centre for International Agricultural Research (ACIAR), for in-situ management of paddy stubble (straw)

<https://www.ceew.in/sites/default/files/CEEW-Paddy-Residue-Burning-in-Punjab-Farmers-Perspective-s-Issue-Brief-29Mar19.pdf>

needed to create robust scientific evidence and an accurate set of measurements and data to enable clear messaging for policy and decision makers.

- Monitoring is necessary not only to evaluate the problem but also to assess any impact that policy actions may have. Awareness and public outreach of the problem is critical so citizens can understand the problem, participate in local advocacy, and be part of the solutions.
- Use of alternative monitoring methods (supplementing and alongside, not instead of traditional compliance monitoring) such as low-cost sensors, satellite derived products and models need to be investigated and strengthened to close the monitoring gap in these countries efficiently and cost effectively.
- Let local experts tell their own stories. Involving local experts in the evidence gathering process will help provide a better understanding of the problem to political leaders.
- Regional capacity needs to be improved via improved access to appropriate and/or cutting edge technologies alongside appropriate training and research as needed from across the world and within the region.
- Countries need to divest from fossil fuel use and accelerate the renewable energy transition.
- Preferential taxation for clean energy related technology can create a favourable environment for its promotion. For example, market-based instruments like preferential taxation for clean vehicles and higher taxation for polluting vehicles can drive demand favourably. The tax revenue has potential to be reinvested in cleaner solutions or mitigation actions.
- To improve air quality, the focus of transport for cities in the region needs to change from reliance on private vehicles to public mass transport systems.
- An interdisciplinary approach which is still largely missing in South Asia, is needed. There is a need for a common understanding of the sustainability challenge and creation of a common scientific base, after which countries work together to define appropriate solutions. Solutions based on science and evidence are more likely to be efficient, effective, and transformative.
- Comprehensive, dynamic policy for air pollution mitigation is needed as sources change and the region needs to be able to adapt its plans as evidence emerges and understanding increases. Policies must be assessed and monitored to make sure they are effective.
- Countries and cities need to be set up for success by improving and increasing capacity including via technical assistance, capacity support and the sharing of good practice to ensure intergovernmental declarations translate into solutions on the ground.
- To improve air quality, countries need to invest in clean technologies, e.g., in the transport, power generation and agriculture sectors (such as moving to solar or low sulphur fuels). Changes need to ensure solutions for improving air quality have economic benefits, along with health benefits. Co-beneficial incentives need to penetrate in the private sector as well as at the regional and local levels. For example, street vendors, small foundries or similar informal economic activities need to be provided with incentives so they can both take ownership of issues and contribute to cleaner air.

Parallels between South Asian countries offer opportunities to collectively work on the problem by pooling resources including knowledge, observational capability (existing compliance systems as well as future low-cost technologies) and sharing lessons from global studies. These have the potential to bring down barriers to understanding and therefore action, about economic co-benefits and to

bridge the gaps between economic growth, health and wellbeing, protecting the environment, sustainability, and development. Transnational and cross-agency cooperation and collaboration at the national, regional and local levels along with addressing in-country pollution sources in the context of the regional air-shed could be the key to effective action in South Asia.