

## *High-level Plenary*

### **Smog Management in South Asia: From Local Action to Regional Cooperation**

Air pollution has become one of South Asia's most serious public health and development concerns. The Indo-Gangetic Plains and Himalayan Foothills are home to [nearly one billion people](#) exposed to unhealthy air, with air pollution associated with around one million premature deaths each year and economic losses estimated at close to 10% of regional Gross Domestic Product (GDP). South Asia is also home to [nine of the world's ten cities with the worst air pollution, with PM<sub>2.5</sub> concentrations](#) in some densely populated areas reaching levels many times higher than the World Health Organization guideline. The problem is particularly severe during the winter months, when weather conditions, low temperatures and reduced air movement allow pollutants to accumulate and produce prolonged episodes of smog.

Smog in South Asia is produced by a combination of sources rather than a single activity. Major contributors include transport, industries and power generation, brick kilns, household use of solid fuels, crop residue burning, inefficient use of fertilizers and livestock waste, construction and road dust, and open burning of municipal waste. The relative importance of these sources differs across locations, making source-specific action essential. Measures need to include cleaner public transport and vehicle standards, improved industrial and brick-kiln technologies, cleaner household energy, better waste collection and disposal, improved agricultural practices and alternatives to crop-residue burning. The challenge is to identify which measures will produce the greatest reduction in pollution in each area while remaining affordable and practical for households, farmers, workers and businesses.

A further difficulty is that air pollution does not remain within the boundaries where it is produced. Pollution can travel hundreds of kilometers and is carried through shared airsheds across cities, provinces, states and national borders. The World Bank identifies [six major airsheds](#) in South Asia and finds that, in many major cities, more than half of air pollution may originate outside the city. This has important implications for countries such as [Pakistan, India, Bangladesh, Nepal and Bhutan](#), which share interconnected air flows across the Indo-Gangetic Plains and Himalayan Foothills. City-level measures remain necessary, but they cannot fully address a problem whose sources and impacts extend beyond administrative boundaries.

This regional dimension creates a strong case for cooperation and environmental diplomacy. Countries can begin with practical areas where cooperation is possible, including joint air quality monitoring, sharing of meteorological and emissions data, common approaches to source assessment, satellite-based monitoring, research on transboundary pollution, seasonal forecasting and coordinated responses during severe pollution episodes. The World Bank estimates that coordinated measures across sectors

and borders can be [45% less costly](#) than approaches implemented without such coordination. Regional cooperation can therefore reduce not only pollution but also the cost of achieving cleaner air.

This session seeks to bring together policymakers, environmental authorities, scientists, urban and transport planners, agriculture experts, development partners and regional stakeholders to discuss practical approaches to reducing smog and improving air quality in South Asia. The session aims to:

- Examine the major sources of air pollution across South Asia and their relative importance across urban, industrial and agricultural areas;
- Discuss practical measures for reducing emissions from transport, industry, brick kilns, households, agriculture, crop residue burning, waste and dust;
- Examine the value of an airshed-based approach and the implications of transboundary movement of air pollution;
- Explore how regional diplomacy, data sharing, joint monitoring and scientific cooperation can support action across shared airsheds;
- Discuss the financing and institutional requirements for scaling clean air measures;
- Identify practical areas for regional and subnational cooperation that can produce measurable improvements in air quality.

The session is expected to provide a clearer understanding of how South Asian countries can combine domestic action with regional cooperation. It will examine what governments can do within individual sectors, where coordination between provinces and countries is required, and where development partners can support investment, technical capacity and knowledge exchange.

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