Urban Air Quality Management in Indonesia: Transport Reforms and Policy Pathways

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Abstract

Economic growth and rapid urbanization in an urban area such as Jakarta, as a megapolitan city in Indonesia, have led to a rapid increase in energy consumption, resulting in a rise in air pollution sources. Air pollution in Jakarta has become a significant problem, as $PM_{2.5}$ concentrations continue to increase. The current air quality status in Jakarta is a major concern, with pollution levels frequently exceeding both national standards and WHO guidelines. Action plans and better air quality management are needed to control air pollution in the city.

To control air pollution and prioritize effective solutions, it is essential to first understand its main sources. Emission Inventory is a key air quality management tool that helps identify pollution sources. Scientific assessments and robust data are crucial to supporting the government in prioritizing and developing the most effective control options and policies. The finding in Jakarta shows that transportation is the dominant source of CO, NO_X, $PM_{2.5}$ and VOC emissions, primarily due to high gasoline and diesel consumption and high traffic activities.

Existing regulations, policies, and best practices initiated in Indonesia are insufficient to curb rising emissions, leading to deteriorating air quality, particularly in Jakarta. Further action is required to enhance current best practices and identify measures with high potential for emissions reduction especially from transport sector.