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## **EXAMINING THE LOCATIONAL APPROACH TOWARDS OPTIMAL SITING OF AIR QUALITY MONITORING STATIONS IN INDIA**

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### **Abstract**

Increasing air pollution levels globally has been one of the major environmental risks on the ecosystem having multiplier effects on the human health. This pressing issue has necessitated the establishment of regulatory bodies tasked with monitorization and assessing pollution levels. This monitoring is particularly crucial in urban areas where human activity and population density are prevalent. Effective air quality monitoring is pivotal in formulating and implementing sustainable environmental policies. In the context of India, various measures have been taken to establish Air Quality Monitoring Stations (AQMS). These stations play a pivotal role in shaping action plans aimed at enhancing overall air quality throughout the country. This research paper presents a systematic literature review of various approaches and methods for the selection of air quality monitoring station sites based on a review of 25 published works. This paper provides an overview of the design techniques employed by studies over the past three decades. Furthermore, this study meticulously scrutinizes the guidelines and initiatives that govern the selection of optimal locations for these crucial monitoring stations. The culmination of this comprehensive analysis lies in the identification of diverse evaluation criteria, which hold the potential to facilitate a comprehensive and holistic approach to air quality management. The research aims to bridge existing gaps in the literature and offer recommendations for an optimal approach to positioning air quality monitoring stations in urban areas across India and globally. This approach seeks to enhance the management of air quality and contribute to the realization of improved environmental conditions.

*Key words:* Air Quality Monitoring Stations (AQMS), air quality modelling, GIS based approach, monitoring, site selection

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