

## DESIGN AND DEVELOPMENT OF NOISE PREDICTION MODELS USING GIS IN VISAKHAPATNAM

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### ABSTRACT

*Visakhapatnam is one of the fastest growing cities in India, with this the population and the vehicular growth has been tremendously increasing, day by day. Due to this vehicular growth, the traffic flow on the roads is paralleling increasing and as a bi-product huge disturbance is created in the city environment in the form of sound. This unwanted sound in the environment is known as Noise pollution. Noise pollution has become the one of the major pollutant in the city. The main sources of this pollution are vehicular traffic, mechanical works, construction activities, aircraft movements, railways and other human related activities. The city consists of an inbuilt port, due to its daily activities like import and export undertakings also resulting in the Noise Pollution. Environmentalists say that if the Noise is more than the permissible limits it may leads to cause severe health problems. It is observed that Noise level ranges from 70 to 82 dB on average along the National highways which passes middle of the city, and in busy junctions during peak hour timing both in the morning and evening, these levels were recorded in between 85 to 95 dB, which is quite high and hazardous to citizens of the areas where the Noise Levels are more than the recommended levels. Sensitive areas such as KGH, Sevenhills hospital and other areas which come under the silent zone had the quietest being annoying by noise pollution. Flight services are also affecting the lives of people who reside in the areas, where the takeoff and landing are close to the houses. It is recommended that, proper provisions should be made to overcome this noise pollution. Construction of Noise barriers and plantation along the roadways, regular scanning of the automobiles may control the noise pollution and maintenance of home appliances may help in decreasing the Noise pollution inside the houses.*

**KEYWORDS:** *Sound Level Meter, Graphs, Attribute Data & Noise Barriers*

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