

Application Of GIS And Modeling To Assess The Impact Of Environmental Pollution Due To Dust In The Quarrying Area

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Abstract: Dust pollution simulating is an issue essential in Vietnam. In recent years, many research methods based on mathematical model to assess the contamination has been implement. However, these models do not take into account of the complex terrain elements, this will definitely reduce the reliability of simulation results. AERMOD Software released allowing to overcome the drawbacks of previous models when given the terrain into account. Besides that, the incorporating of GIS application and model results could help the simulatimng results more obviously. Therefore, study the model application step by step into practice in Vietnam is necessary.

This paper presents initial results of GIS applications and AERMOD model to simulate dust pollution from quarrying operations, in case study of quarries in Tan Uyen, Binh Duong province. Results of the research are information system AirPIA (Air Pollution Impact Assessment for quarrying for Tan Uyen district software) to help manage information and display simulating results based on WebGIS technology.

Keywords: Air pollution, modelling, dispersion model, GIS, complex terrain.