

UNIVERSITI TEKNOLOGI MARA

**THE EFFECT OF METEOROLOGICAL
CLIMATE ON VARIATION OF PM10 IN PERAK**

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Thesis submitted in fulfillment
of the requirements for the degree of
Bachelor Of Surveying Science And Geomatics (Honours)

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification. I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

The fine particulate matter, PM10 problem has attracted much scientific and public attention, due to its effects on visibility, human health, and global climate. There are three factors that have important effect on PM10 mass concentration: domestic pollutant emission sources, external sources outside of the country, and the meteorological climate (Jianhua Wang and Susumu Ogawa, 2015). Perak is one of the states of Malaysia and boasts of being the second largest state by size in Peninsular Malaysia, which is an ideal location to study pollutants from long range transport and correlation between PM10 and meteorological conditions. The aim of this study is to investigate the effect of meteorological climate on variation of PM10 in Perak for year 2006 and 2016. In this paper, daily average monitoring data for PM10 and meteorological parameters at Perak in 2006 and 2016 are analysed using statistical methods to replicate the effect of urban air pollution in Department of Environment Malaysia (JASM). In addition, the software used in this study was ArcGIS. The spatial distribution depicts that the Ipoh district of the study area has the most serious PM10 pollution. The correlation analysis results between PM10 concentration and meteorological data showed that temperature and humidity had a positive and negative correlation with PM10 follow the monsoon.

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