EFFECTS OF SUB-URBAN AREA DEVELOPMENT IN SELANGOR TO AIR POLLUTION INDEX FROM 2012-2014

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ABSTRACT

Due to the increases in the population, numbers of vehicles, and traffic problems during peak time tend to effect the trend in the air pollution index when exposed for a long time. Area where there is a lot of human activities going on especially near school where there must be emission of motor-vehicle during school sessions from the parents' cars or motors for taking and sending children to school as well as school bus. This study aims to explore the trend of ambient air pollution (PM_{10}, CO, SO_2, NO_2, O_3) within the two selected Malaysian air monitoring stations in Selangor of three-year database from 2012 to 2014. The air pollution databases were compared to the recommended Malaysian Ambient Air Quality Guidelines (MAAQG) and the association between air pollutants and meteorological factors also assessed. In addition, data analysis has been carried out in the following developed sub-urban areas: Banting and Kuala Selangor. Based on the result, it can be said that the year 2014 was indeed the worst year for Banting and Kuala Selangor especially during the month of March, the highest reading recorded in Malaysia was in Banting and Kuala Selangor reaching hazardous level exceeding 300. We can conclude that Banting air quality is worse than Kuala Selangor. Based on the data, it can also be found that the month of May foe every year is not a good time for Banting and Kuala Selangor, with more than 90% of all readings in the region scoring always went up above the average.

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CHAPTER 1
INTRODUCTION

1.1.RESEARCH BACKGROUND

Selangor Darul Ehsan is known to be one of the most successful states in Malaysia regarding to its socio-economic development. In order to expand its economic base and restore the confidence of local and foreign investors, Selangor has taken an initiative in achieving a developed by the year 2020 country by creating more developments. Infrastructure development has been stressed on, and by financing on public projects, Selangor as of now has been proved to be the best states with better transportation network system as well as port and airport facilities among all states in the country. All of this development processes emit air pollutants which is a matter in the air that can have unfavourable effects on humans and the ecosystem and adds a certain amount of pollution to the environment (Pereira, et.al, 2005). In the other part of the world, the effect of air pollution on inhabitants' health is greater in underprivileged communities according to a report done by World Health Organisation (WHO), the amount of deaths linked to air pollution is more than 90 per cent in a low- or middle-income countries especially in Asia and Africa (News, 2018; Sun & Gu, 2008). WHO's study found that "around seven million people die every year from exposure to fine particles in polluted air."

In order to view the level of pollution in the air, an air pollution index is used. Air Pollution Index (API) is a measurement tool through which an uniform air pollution data can be reported (Swamee & Tyagi, 2011). An index for reporting daily air quality called API is established. It publicizes the cleanliness of the country, and what correlated health effects might trouble the people in the country. The API helps to detect and gives information of health effects that be experienced within a few hours or days after breathing unhealthy air. The purpose of the API is to help the publics understand what local air quality means to our health. Malaysia has introduced an initial strategy in the pollution prevention program such as air quality monitoring. Air pollution in Malaysia is reviewed based on the reports of the air quality monitoring in multiple big cities in Malaysia, which included air pollutants such as Carbon monoxide (CO), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Ozone (O_3), and