AIR POLLUTION INDEX (API) IN SELANGOR FOR YEAR 2013

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ABSTRACT

Air Pollution causes a number of economic and social problems such as adverse effects on public health and environment quality. This study aims to investigate the pattern of air pollution index in Selangor for year 2013, identify the sharpest parameters that contribute to air pollution, and predict the level of air pollution index (API) in Selangor using graphical method. Air pollution is defined as a gas or solid neither liquid, dispersed through ordinary air which released in big sufficient amount of quantity that can harm the health of living things, kill or spoil the living things, or making them growing stunted. From this study, five parameters being observed (SO_2, NO_2, CO, O_3, and PM10). The raw data can be collected and reviled at the Department of Environment (DOE) Malaysia. Among 52 automatic air quality monitoring stations, five places in Selangor was chosen to be monitored. The five station are located at Klinik Kesihatan Pandamaran, Klang, Sekolah Kebangsaan Bandar Utama, Petaling Jaya, Sekolah Kebangsaan TTDI Jaya, Shah Alam, Sekolah Menengah Sains Kuala Selangor, and Kolej Mara, Banting. From this study, monitoring stations at Klinik Kesihatan Pandamaran, Klang shows the highest reading of air pollution, while Kolej MARA, Banting is the lowest compared to the others for year 2013. The trend of this air pollution Index (API) at Selangor in the middle of the month (May until July) is high pollutant detected due to drought season, and others factor. Highest value from Klang (SO_2;0.013 ppm, O_3; 0.012 ppm, CO; 4217 ppm, PM10; 250 ug/m^3) and for NO_2 is from Petaling Jaya (0059 ppm). The lowest detection is mostly from Shah Alam (SO_2 & NO_2; 0 ppm), CO (0 ppm, Klang), PM10 (25ug/m^3, Kuala Selangor, and O_3 (0.026 ppm, Petaling Jaya). From this trend, and estimation can be made in order to control and to overcome the air pollution index in future.

Keywords: trend of air pollution, Selangor's air pollution, monitoring station, air pollutants

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND STUDY

Malaysia has developed quite rapidly over the past 30 years. However, such a rapid growth has led to serious and critical environment concerns especially in the progress state, such as Selangor Darul Ehsan. Selangor is the major pollution is the most concern phenomena on earth that need to be apprehension every day. A various of natural, vehicle and industrial activities contribute to the occurrence of air pollution. There are many reasons behind regularly increasing this air pollution. Day by day the fresh air of the environment is getting polluted because of the mixing of particulates, biological molecules, and other harmful materials.

In addition, increase number of vehicles on the road and rapid housing development will result serious air quality in Selangor. The release of Carbon monoxide, Nitrogen dioxide, Sulfur dioxide, Particulate matter, and ground ozone layer from such sources is causing the whole atmospheric air pollution. Ozone layer is also getting affected too much by the air