

ABSTRACT

Green open space is an important aspect in controlling air pollution because of its ability to reduce pollutants by up to 69%. One of the big cities in Indonesia, for example Bandung City, only has less than 1/5 of the green open space area. This is still below the minimum limit for the total area of green open space required by the regulation. For educational areas such as Telkom University, Bandung, which are located between densely populated settlements and industrial areas, the existence of green open space is very important as a pollutant reduction agent and maintaining ecosystem balance. The measuring line starts from the south of the campus and runs north then east and moves south to return to the starting point. Data was collected by moving for 10 minutes at each point, the tool was carried at an altitude of 1.5 meters from the ground. As a comparison, the measurement data from the fixed stations at GKU were used. The data obtained were validated where $PM_{2.5}$ was validated by multiplying by an alpha factor of 0.7 if the RH value was > 80%, and CO_2 using a boxplot where quartiles 1-3 (Q_1 , Q_2 , and Q_3) were determined to eliminate anomalous data. performed statistical calculations with ANOVA test, where $PM_{2.5}$, CO_2 , and O_3 as the dependent variable and green open space as the independent variable. The results of this study indicate that $PM_{2.5}$ in the Telkom University area has a less significant trend of changing data. This is due to the lack of activity on campus, so that the concentration of CO_2 gas at Telkom University is still classified as normal. The concentration of O_3 at Telkom University shows that it is influenced by motorized vehicles that produce O_3 gas precursors and also due to the intensity of sunlight and the density of vegetation in the green open space area. Calculations using the ANOVA test resulted in an F value for $PM_{2.5}$ of 12%, for CO_2 32% and for O_3 51%. The result of the F value is a change in the trend of data on changes in the area of green open space. It was concluded that $PM_{2.5}$ had a weak correlation with changes in the area of green open space, for CO_2 and O_3 had a strong correlation with changes in the area of green open space.

Keywords: CO_2 , Open Green Space, O_3 , $PM_{2.5}$.