

## ABSTRACT

### UTILIZATION AND PROVISION OF GREEN OPEN SPACE DUE TO REDUCE AIR POLLUTION IN THE ROAD CORRIDORS KOM. NOTO SUMARSONO AND AHMAD YANI STREET DISTRICT PURBALINGGA

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Some studies indicate that transportation is a major source of air pollution in urban areas. Road corridor of Kom. Noto Sumarsono and Ahmad Yani street is part of the primary collector road network system in Purbalingga. When conditions of vehicle's volume increases and low-speed motor vehicle's fuel consumption increases. It causes the exhaust gas emissions of motor vehicle is increasing. Provision RTH considered to be the most effective way to tackling air pollution.

Research study area were divided into two observation corridors, namely road corridors Kom. Noto Sumarsono, and road corridors Ahmad Yani. Based on the data obtained, quality of air in both these roads in 2015 is 139  $\mu\text{g} / \text{gr}$ . It means air quality in both these roads included into **unhealthy** category based on ISPU.

In order to tackling air pollution, been selected optimizing public RTH (Green Open Space) and private green space with the election of vegetation selected based on their ability to reduce pollution in the high average. In the public RTNH of 1,799,304  $\text{m}^2$  area, with optimization of land road corridors Kom. Noto Sumarsono and Ahmad Yani can be planted as many as 27 additional trees by optimization of land and can reduce pollution by 12.6132  $\mu\text{g} / \text{g}$  (11.57%), subsequent to optimizing private green open space as an tree planting area of 1768.466  $\text{m}^2$  can be planted as many as 60 additional trees and can reduce pollution by 19.254  $\mu\text{g} / \text{g}$  (17.66%) .

However, based on the observation that not all the public and private open space in the building can be used as a green space. Because of particular needs, it is assumed 30% of land can be used as a green space. Based on identification of available land on the public and private green open spaces, has been able to accommodate the number of trees to tackling the entire air pollution. Vegetation optimization efforts on public and private land along the road Kom. Noto Sumarsono and Ahmad Yani was able to reduce emissions by the **middle** category that is in the range of 77.1328  $\mu\text{g} / \text{g}$ . Planting in pots or practice green roof and green wall/vertical garden can be done for buildings that do not have RTH or there is no land as tree planting area and also redirect private vehicle users to public vehicle and prioritize safety of mass transportation.

Keywords : Air pollution, Land optimization, RTH (green open space).