

ABSTRACT

Spatial planning is the government's effort to form a legal basis. In Law No. 26 of 2007 states that spatial planning requires the existence of green open space (RTH) filled with plants. Green open space can lower the ambient temperature because solar radiation is held back by the shade plants contained in it. The purpose of this study was to determine the effect of green open space area and the pattern of vegetation distribution on environmental microclimate, so that it can estimate area of green open space and its composition so that the temperature can decrease. This study uses a computer simulation method with ENVI-Met software.

The research was conducted in a simulation with the stages of field measurements, drawing sketch using ENVI-Met, simulation, and analysis. From the simulation results will be obtained an optimal sketch which is expected to reduce energy consumption in cooling.

From this research, it was found that the effect of green open space on the microclimate in the area was not too significant. The distribution of green open space with the spread got good result because sketch 1 shows an average temperature value that is low compared to other sketches of 31,9°C. The optimal combination of this research is in sketch 1 because it has a low temperature distribution of 42% of the total area.

Keywords: Microclimate, RTH, computer simulation, RTH configuration.