

STUDI POTENSI KANOPI POHON DI KEBUN RAYA BOGOR DALAM MENYERAP EMISI KARBONDIOKSIDA DARI KENDARAAN BERMOTOR

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Abstract

ABSTRACT

Increasing numbers of vehicles will increase the concentration of carbon dioxide (CO₂) in the atmosphere. Bogor Botanical Gardens was chosen as study site because it is one of urban forest in Bogor City with an important role in absorbing carbon dioxide (CO₂). Therefore to calculate carbon dioxide (CO₂) that was absorbed by canopy trees in Bogor Botanical Garden used the software ArcView3.2 and extensions CITYgreen 5.0. Based on the result of the analysis CITYgreen 5.0 obtained information stating that existing condition in Bogor Botanical Gardens has carbon dioxide (CO₂) sequestration potential by 134,61 tons/year and it is able to absorb carbon dioxide (CO₂) emissions only 0,06 % of carbon dioxide (CO₂) emitted by motor vehicles at this time. Bogor Botanical Gardens with the first scenario could increase the carbon dioxide (CO₂) sequestration potential from existing condition by 117,06%. The first scenario is able to absorb carbon dioxide (CO₂) emissions by 0,055% carbon dioxide (CO₂) emitted by motor vehicles in 2040. Then the second scenario was made to increase the carbon dioxide (CO₂) sequestration potential. The second scenario could increase the carbon dioxide (CO₂) sequestration potential from the existing condition in the Bogor Botanical Gardens by 267,88%. The second scenario is able to absorb carbon dioxide (CO₂) emissions by 0,094% of carbon dioxide (CO₂) emitted by motor vehicles in 2040.

Keywords: Bogor Botanical Garden, Carbon dioxide (CO₂) emission, Carbon dioxide (CO₂) sequestration, CITYgreen 5.0

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