

Carbon budget in an urban forest

*Hirofumi Sugawara¹

1. National Defense Academy

Urban green areas, although being decreased in its space, have multi-functions in the urban area and would bring us benefit in the human health and safety. The carbon uptake in the urban green areas should be also benefit in GHG reduction. This study introduces our micrometeorological observations in a large park (Shirogane park) in Tokyo. The park locates in residential- and commercial area with compact mid-rise buildings near the center of Tokyo. The park was covered with forest canopy whose mean height was 14 m. Our 8-years-continued observation with eddy covariance method clarified the carbon budget in the park forest canopy. The maximum uptake of carbon was 8 gC/m²/day in Jun above the forest canopy. The annual NEP was 820 gC/m²/year from the eddy covariance, although 360 gC/m²/year from the allometry method.

Keywords: carbon budget, urban park, eddy covariance method