

ABSTRACT

Meilina Rahayu, 2024. Analysis of Stored Carbon Reserves in Trees in the Green Open Space (RTH) of Pramuka Park, Bandung City and Surrounding Areas. Supervised by Prof. Dr. Cartonno, M.Pd., M.T., Gurnita, S.Si., M.P.

*The carbon reserves in trees within green open spaces (RTH) are crucial for mitigating the impacts of global warming, particularly in reducing the levels of CO₂ in the air. Plants, including trees that contain chlorophyll, play a role in absorbing carbon dioxide (CO₂) from the atmosphere with the help of sunlight, water, and soil through the process of photosynthesis. The products of photosynthesis are stored in the form of biomass and carbon reserves, allowing the plants to grow larger and taller. A study on the "Analysis of Stored Carbon Reserves in Trees in the Green Open Space (RTH) of Taman Pramuka in Bandung City and Its Surroundings" was conducted from May 30 to May 31, 2024. The aim was to determine the annual carbon reserves in the RTH of Taman Pramuka in Bandung City and its surroundings. The research method used was a quantitative descriptive method with a non-destructive approach. The research design employed the technical sampling method of saturated census sampling (census) using allometric equations. Data collected included carbon reserve analysis data, tree species, and supporting climatic factor data such as light intensity, temperature, and air humidity. The data results included the identification of tree species, tree species diversity data, and the results of the stored carbon reserve analysis. A total of 67 trees with 25 species were found. The species diversity index was 2.81, categorized as moderate. The total carbon reserves in Taman Pramuka, Bandung City, and its surroundings were obtained at 102,464.46 kg per year, with the highest carbon reserves in Trembesi (*Samanea saman*) amounting to 65,060.79 kg. The high carbon reserves can be influenced by several factors, including vegetation density, trunk diameter volume, wood specific gravity, and environmental factors, especially sunlight.*

Keywords: Biomassa, Carbon Reserves, Green Open Spaces, Taman Pramuka