# Estimation of Carbon Sequestration in Urban Parks in the Rufina Alfaro Township, Panama City

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Carbon dioxide (CO2) has gained importance in the last decade; large quantities of this toxic gas are stored in the atmosphere, altering the daily life of people and contributing to global warming. Due to the above, this research focused on estimating the carbon in the biomass present in the trees of three parks in the Rufina Alfaro district, Panama City, and an inventory of parks and biomass was also elaborated. The estimation of biomass carbon sequestration was carried out through a forest inventory, where the tree species were identified, as well as the parks within the township with the highest carbon sequestration. To disseminate the results to community members and decision-makers, QR codes were created and placed on each tree, with information on the species, family, and carbon sequestration of the tree. The study area was delimited with the Google Earth application and the PictureThis tool was used to identify the species. With these data we proceeded to calculate the biomass area and the estimate of carbon sequestration, using the indirect method of Weissert, 2014. The biomass inventory of these 3 parks gave us a total of 162 trees. A total of 11 species and 10 tree families were obtained. The carbon sequestration estimate is 8,884.88 kg tons. Among these parks, the one with the highest total CO2 absorption is Brisas del Golf Recreational Park, followed by Jesús Benavides Park, and finally, Brisas del Golf Central Park. The results of this research area useful tool for decision-makers to develop better conservation measures for urban parks or to promote better practices for the sustainable development of urban communities.

**Awards Won:**