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The citizen science project Co-Carbon Trees Measurement: quantifying the CO2 captured by urban trees

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One of the big challenges that the EU has proposed is the mission of 100 cities to become carbon neutral by 2030, and the whole continent by 2050. One of the key points to know is how many CO2 can capture the whole urban tress in a year. This amount of absorption depends on several parameters (type of tree, age, water requirement, ...), being weather conditions during the whole year the most relevant. The amount of CO2 captured by a tree can be estimated by using different models. The method and equation proposed by Shadman et al. (2022) has been used in the Co-Carbon Trees Measurement project. This is a citizen science project developed in several cities in the metropolitanean area of Barcelona. The results of the pilot developed in the city of Viladecans (67.000 inhabitants, 15 km south to Barcelona) is presented. In this project more than 700 student measured around 1300 trees in a morning, which data allow to take a magnitude of the carbon captured by the 20.000 trees in the city, and so to know how far is the city to become, a carbon neutral. The project proposes repeat yearly this measurement in the same trees, to calculate the CO2 captures in a year, and to link with some annual meteorological parameters like average temperature and precipitation.

Shadman, S., Khalid, P. A., Hanafiah, M. M., Koyande, A. K., Islam, M. A., Bhuiyan, S. A., ... & Show, P. L. (2022). The carbon sequestration potential of urban public parks of densely populated cities to improve environmental sustainability. *Sustainable energy technologies and assessments*, *52*, 102064.