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Carbon Dioxide Sequestration Potential Of Tree Species Inhabiting The Botanical Garden Of Mangalore University Campus

The carbon dioxide sequestration potential of 469 trees belonging to 70 species and 32 families was estimated in the Botanical garden of Mangalore University. The measurement of girth at breast height and approximate height were documented to measure the amount of carbon sequestration. The total biomass documented in the study area is 186,307.3 kg/m³, comprising above-ground biomass of 147,862.9 kg/m³ and below-ground biomass of 38,444.36 kg/m³. The total carbon sequestered in tree species is found to be 341.52 tonnes. The species found to have the highest carbon sequestration potential is *Terminalia paniculata* with 60,919.542 kg followed by *Pterygota alata*, *Acacia auriculiformis*, and *Pterospermum acerifolium* with 54,422.901, 29,108.145, 24,983.196 kg of CDS (Carbon dioxide sequestrated) respectively. The lowest is *Canarium strictum* which is found to sequester 47.054 kg of CDS. *Acacia sp.* despite of its greater carbon sequestration potential is not preferable or desirable because of its detrimental effects on biodiversity. With reference to IUCN conservation status, it is evaluated that the study area has a total of 5 critically endangered, 4 endangered, 4 near threatened and 11 vulnerable tree species and about 13 endemic tree species of Western Ghats.

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