

Tree Composition Mapping and Environmental Role of small natural areas in dense Urban setting: Case study of Jadavpur University Campus in India

Indian cities, characterized by high density, rapid growth and on fast track developmental path, are losing greenery at an alarming rate due to infrastructure augmentation and reconstruction activities. Small and medium sized public and private properties with a rich repository of vegetation, particularly trees, have long been recognized as green oases within such dense 'grey' city fabrics. Institutional campuses come foremost in this list with their high potential in becoming green campuses in every sense. This paper presents the case of one such natural patch in a University in Kolkata (formerly, Calcutta), the fourth largest city of India. Endowed with matured trees, this open access zone plays significant ecological and societal functions for both the University community and the neighborhood. A Biodiversity Register created by students of the University in 2010-11 had recorded high bio-diversity in this part of the campus. The tree resources of this zone has been mapped using GPS tools for easy identification, better appreciation and management of this environmentally significant patch, the methods and findings of which have been presented here, along with an appraisal of its environmental benefits. Its Simpson's diversity index for trees was found to be 0.91 and carbon sequestration potential to be 3.28 t C/year.

Key words: Tree population, Species characterization, Bio-diversity, C-sequestration, Environment

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