

A CASE STUDY:

Contribution of trees to the climate of Bopal

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SUMMARY

Bopal is located at 23.03°N Well known, trees and open area are contributing well to the arrangement of artificial urban climate and of-course the urban climate is deprived of its natural characteristics in many ways. It has been seen that a small green area will lower the temperature by 3 – 3.5 °C and intensified the relative humidity by 5 – 10 per cent ventilated the overheated, dirty and polluted town centre and provide fresh air (Bernatzky, 1982) Many species inventory is an integral part of any floristic work. A species inventory is a formal surveying, sorting, cataloguing, quantifying and mapping of the occurrence. Here our findings would be contribution of trees to the climate of Bopal area in Ahmedabad wherein 69 species of trees with major species like, *Azadirachta indica* A. Juss., *Cassia siamea* Lamk., *Delonix regia* (Bojer. ex Hook) Rafm., *Peltophorum pterocarpum* DC., *Acacia nilotica* (L.) Willd ex Delile ssp. *indica* (Benth.) Brenan, *Prosopis cineraria* (L.) Druce., *Prosopis juliflora* (Swartz.) DC., *Pongamia pinnata* (L.) Pierre, *Eucalyptus globulus* Labill., *Alstonia scholaris* (L.) R. Br. are concerned. The area has rich vegetation involving many different types of tree species and hence would be interesting study.

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In modern health concerned, world, now a day's city/town are classified on their pollution level like air quality, noise level and temperatures during different parts of year. Due to density of population in urban area, pollution is un-avoidable. Pollution can be natural (lava, cyclone, flood, sun-heat) or created by human beings. Pollution affects our daily life and even to our human structures and hence should be controlled if cannot be stopped. Years study of science has proved that trees are one of the most important weapon to control different kind of pollution and fortunately God has given us gift of trees. While studying effects of trees, we have been to Bopal area of Ahmedabad and our study has made some contributions.

The area of Bopal is large and couple of trips were made during February to July-2011. All the collected plant species were identified with help of monographs of flora and plants were recorded. Photographs of some plants have been taken. Plant species

were tabulated according to the Bentham and Hooker's system of classification.

A total of 68 species of trees belonging to 26 families were recorded from Bopal area. Out of 68 species, *Azadirachta indica* A. Juss. was dominated by 2755 individuals, followed by *Acacia nilotica* (L.) Willd (2692 individuals), *Prosopis juliflora* (Swartz) DC.(1130 individuals), *Prosopis cineraria* (L.) Druce. (811 individuals) and *Peltophorum pterocarpum* DC.(682 individuals) while among families, Mimosaceae was dominated by 9 species, followed by Caesalpinaceae 7 species, Urticaceae 6 species, Fabaceae 5 species and Aeracaceae 4 species.

Trees add beauty to their surroundings by adding colour to an area, softening harsh lines of buildings, screening unsightly views and contributing to the characters of their environment.

It has been proved that young trees absorb CO₂ at rate of 6 kgs per year. Of course trees give back O₂ which is very important for human beings. For every ton of new-wood growth, about 1.5 tons of CO₂ are removed from the air and