

## Landscape Quality Analysis in Delhi Using Geospatial Technique

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## Abstract

Public open spaces (POS) are connected between people and nature and are necessary to retain the urban landscape quality. Rapid urban growth puts tremendous pressure on open and green spaces, which reduces the quality of the urban landscape. As a result, the size of the urban green and open space is decreasing at an alarming rate. Therefore, this study analyzes the availability of per capita POS to assess the landscape quality using geospatial techniques. The POS were extracted from Google Earth data on ArcGIS 10.2 software. The per capita POS was calculated using demographic data and then z-score for each POS type was calculated. The weights were assigned to each five variable of landscape quality, and then it was multiplied by the respective z-score (scale-free). Finally, the composite index score was calculated to develop the landscape quality index. The per-capita share of POS in East Delhi is 7.01 m<sup>2</sup> and wards with high population density have comparatively low proportion of POS. The landscape quality index shows that in more than two-thirds of the wards, the landscape quality is poor. The north- and central wards are densely populated and have low per capita POS; therefore, they have the least index score on landscape quality. At the same time, the wards of south-eastern and eastern parts wherein the population density is low, scores high on the index of landscape quality. It is seen that most of the wards did not match the criteria of WHO and UN for per-capita availability of POS.

Keywords: Public open space (POS), Urban landscape quality, Population density, Z-score, WHO