

## **EFFECT OF MINING ON VEGETATION OF THE SILICA MINING FOREST AREA AT SHANKARGARH, ALLAHABAD**

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**ABSTRACT:** The present paper deals with the study of the floristic composition of the silica mining area of Shaankargarh Forest, both at disturbed and un-disturbed site and elucidates the difference in floral composition between disturbed and undisturbed site. The vegetation study was carried out at undisturbed and disturbed site of Shankargarh forest using standard quadrat method. The quadrates were laid randomly to determine the diversity and floristic composition of this site. The quadrates of 10 m x 10 m were laid randomly for tree species and nested quadrates of 5 m x 5 m for shrubs and 1 m x 1 m for grasses and herbs were taken up inside the quadrates for tree species. Each tree, shrub and herb species were recorded within their respective quadrates. Density, abundance and frequency values of recorded species were calculated and species were categorized into different classes according to their frequency *viz.*; A (1-20%), B (21-40%), C (41-60%), D (61-80%) and E (81-100%). The importance value index (IVI) for each species was determined as the sum of the relative frequency and relative density only. Species diversity, Concentration of dominance, Species richness and Evenness index were calculated for tree, climber/ shrubs and herbs at undisturbed and disturbed sites. The distribution pattern of the species was studied by using Whitford's index. Similarity index between floristic composition of disturbed and undisturbed sites was determined by using Jaccard's and Sorenson's index of similarity. The present study led to the conclusions that resultant vegetation analysis can be used as important tools for predicting the suitability of mined habitats for the plant growth. The information gathered on various aspects of local vegetation and colonization of plants would be helpful in revegetating the mined areas.

**Key words:** *Silica mine, reclamation, floristic composition, vegetation study.*