



## Site suitability analysis of future development for a new township using remote sensing and GIS techniques

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**Abstract:** Geoinformatics based site suitability analysis for development of a new township in the study area using geo-environmental parameters has been evaluated. Suitability for a newer township was assessed based on modelling of various terrain parameters in GIS like geology, geomorphology, slope, ground water prospects, land use, soil and proximity of roads. Employing on Saaty's Analytical Hierarchy Process (AHP), the importance matrix was derived to calculate the individual theme weight, reflecting the contribution of the factor towards suitability. The weighted parameters were aggregated in GIS to develop the cumulative index, which were further reclassified into five classes of suitability viz., high (area 10.41 km<sup>2</sup>), moderately high (4.56 km<sup>2</sup>), moderate (1.57 km<sup>2</sup>), poor (0.5 km<sup>2</sup>) and unsuitable (81.66 km<sup>2</sup>). The proposed township site delineated based on geoinformatics approach is situated in the vicinity of Rishikesh Township towards its southern extremities.

**Keywords:** Geoinformatics, Saaty's AHP, GIS, Site Suitability, New Township.