

## Method for Monitoring of Surface Temperature & Deforestation Assessment Based on Landsat Satellite Imagery of Riverine Forests

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### Abstract

This study has been focused to develop change pattern of temperature in Indus basin due to deforestation of Riverine forests. The assessment of sub-tropical Riverine forests (STRF) and temperature using Landsat data, the results show that increasing temperature of Indus basin (sub-tropical forests region) was minimum temperature 25.23 °C, maximum temperature 54.85 °C and average temperature 39.19 °C. The Nawabshah division forests are disappearing very rapidly due to construction of dams/barrages on the upper streams to produce hydroelectric power and irrigation works significantly reducing the discharge of fresh water into the lower Indus basin, the anthropogenic activities, livestock population increased grazing load and illegal tree cutting have been contributing to depletion process. In order to achieve Landsat-results of deforestation, estimate physical deforestation amount is 90%. These consequences of forests contribute to surface temperature. The increasing of surface temperature (ST) transferred from mountain range (Lakhey Shah Sader Mountain) right bank to left bank of Indus basin which directly affects (economical hub) such as Nawabshah and Hyderabad city. These environmental hazard developed critical scenario for regional climate change, social problem such as health, economy, ecology and floods. It was necessary to carry out land cover studies; this scientific study has been focusing on the past and present conditions consisting of forests cover and temperature.

**Keywords:** Analysis deforestation; Land use/Land cover remote sensing; supervised classification method; Landsat; Riverine Forests Sindh.