

## Potential Effects of Green Infrastructures on the Land Surface Temperatures in Arid Areas

**Authors :** Adila Shafqat

**Abstract :** Climate change and urbanization has changed the face of many cities in developing countries. Urbanization is linked with land use and land cover change, that is further intensify by the effects of changing climates. Green infrastructures provide numerous ecosystem services which effect the physical set up of the cities in the long run. Land surface temperatures is considered as defining parameter in the studies of the thermal impact on the land cover. Current study is conducted in the semi-arid urban areas of the Bahawalpur region. Accordingly, Land Surface Temperatures and land cover maps are derived from Landsat image through remote sensing techniques. The cooling impact of green infrastructure is determined by calculating land surface temperature of buffered zones around green infrastructures. A regression model is applied for results. It is seen that land surface temperature around green infrastructures in 1 to 3 degrees lower than the built up surroundings. The result indicates that the urban green infrastructures should be planned according to the local needs and characteristics of landuse so that they can effectively tackle land surface temperatures of urban areas.

**Keywords :** climate change, surface temperatures, green spaces, urban planning

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