

The Spatiotemporal Urban Expansion in Greater Kandy Development Area (GKDA)

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In recent decades, Kandy city—the central capital of Sri Lanka—has exhibited rapid urban growth. Until the late nineteenth century, the urban landscape of the city was limited to this narrow basin where the centre of the present city is located. Later, in response to the increasing demand for urban space in the area, the city expands to the hillsides of the valley by damaging environmentally sensitive areas. Recently, the government authority has established ‘The Greater Kandy Development Area (GKDA)’, covering Kandy city and its surroundings to manage the adverse effects of rapid urban expansion. In such a context, monitoring the urban expansion in GKDA becomes very important for effective urban planning initiatives. The present study monitors the LULC of GKDA from 2005 to 2020 using remote sensing data and geospatial approaches. The results revealed that GKDA’s built area changed from 17% to 40%, while the non-built area declined from 88% to 59% from 2005 to 2020. This shows the progressive expansion of built-up has taken during the reduction of non-built-up in the area in the last decades. Specifically, the eastern part of the GKDA exhibits more noticeable LULC variations where the Pallekale industrial zone is located. Mainly urban expansion has taken place along the main transport corridors, which linked the main growth nodes in the area. The finding of this study provides valuable directions for sustainable urban development of the area.

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