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DETECTION OF DECLINE IN THE EXTENT OF LAKES IN BANGALORE CITY USING GEOSPATIAL TECHNIQUES

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ABSTRACT

Bangalore city, fifth largest and fastest growing city in India, has a decadal population growth of 39%. Geographically Bangalore lies on the Deccan plateau of rain shadow region. Number of lakes constructed along the streams in the undulating topography by the rulers of Mysore kingdom and local people for their daily needs. Lakes compensated the absence of perennial rivers. The present study is carried out by using Geospatial techniques by archived Survey of India maps and Cartosat imageries to delineate the lakes, pace and pattern of their depletion in the Bangalore city. The study reveals that the extent of water bodies has declined almost by 17 %, since 1961 due to unplanned urban sprawl. This loss of lakes has resulted in many problems like urban floods, urban heat island and depletion of groundwater. The few existing lakes became dry, polluted by making the situation severe. The observation in this paper helps in establishing a self-sufficient, eco-friendly sustainable smart city that conserves lakes. Thus by giving prime importance to lakes, the water scarcity problem can be managed.

KEYWORDS: Geospatial Techniques, Groundwater Recharge, Lakes, Urban Sprawl, Smart City