Availability of Green Spaces in Colombo Municipal Council (CMC) Area

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With unmanaged and unplanned process of urban sprawl and its inherent consequences, land cover and land use have being changed dramatically all over the world to cater the basic needs of urban dwellers. In order to measure the urban sustainability, different approaches have been introduced by various governmental and private institutes. One such approach is identification of green space extent for one person which is generally known as the per capita green space. Current study was planned with the objective of identifying the availability of green spaces in CMC. Further, it was compared with the available urban green space standards introduced by UN, WHO and EU to check present situation of the city and compared with main cities in the South Asian region. Landsat images which were taken in different years from 1980 to 2015 were used as data sources. Integrated approach of GIS and Remote Sensing was used to analyze the problem. NDVI differencing technique was applied to detect the changes of green spaces and prepared green space maps. The final results of this approach identified that there is a remarkable decrease of green space. It has been recorded as 31.0 km^2 in 1980, but it has been dropped to 5.02 km^2 in 2015. Further, the per capita green space recorded in 2015 is 7.16 m^2 which is below than WHO standard of 8 m^2. However, it can be noted that Colombo city is in a better situation compared to other main cities in the region (Dhaka - 0.49 in 2014, Bangalore – 2.17 in 2011, Mumbai - 0.635 in 2011). Finally, it is recommended to policy makers and urban planners to take immediate actions on this issue immediately to make a comprehensive city plan.

Keywords G*reen space, Urban, Land use*