

## GIS Based Assessment of the Urban Green Space Per Capita in Galle City, Sri Lanka

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The distribution of Green space plays a vital role in urban planning since they contribute significantly in enhancing environmental quality of the city by improving air quality, urban health, reducing urban heat island effect, reducing noise, conserving biodiversity and providing considerable socioeconomic benefits. Proper distribution of green spaces in urban environments is therefore a necessity for the sustainable development and healthy living. Green space is becoming an important measure in judging the ecological sustainability of urban areas. World Health Organization (WHO) has set minimum standard for urban green spaces per capita for healthy living as 9.5m<sup>2</sup>/person. United Nations (UN) expressed the per capita green space should be more than 30m<sup>2</sup>. Therefore, this study assessed the green space per capita in Galle city based on the aforesaid standards. Available green spaces in Galle city are extracted by using GIS and then calculated the extent of green space by Grama Niladari (GN) divisional level. Then the population data and its green space compared with global standards to reach the final results. The analysis shows that 50% of the Galle city is covered with urban vegetation. Kongaha GN division would not fulfill the WHO standard and 1343 sq.m of green space is required to reach the WHO standard. Kongaha, Medawalamulla north and Thalapitiya GN divisions are below the UN standard and required to establish green space with the area of 37956 sq.m, 64797 sq.m and 66018 sq.m separately to fulfill the UN standard. But, the green space per capita of the entire city is 87 m<sup>2</sup>/person indicates that the Galle city is a healthy city in terms of availability of urban green spaces.

**Key words:** *GIS, Green space per capita, Sustainability, Urban green spaces, Urbanization*