



Distribution pattern of population distribution in Polgahawela urban area

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Abstract

Polgahawela city is a major transportation hub in Sri Lanka. However, the population growth of the city and structure different when compared with the other cities on the Island. Therefore, the aim of the present study to assess the prevailing pattern of the concentration and the distribution of the population of the Polgahawela city area. Polagahwela city area consists of twelve (12) Grama Niladhari Divisions (GND) Population data collected from the census and statistics department of Sri Lanka in 2008 and 2018 pertaining to 12 GNDs and Administrative boundary map of the same area were used for the study. Population densities of each GNDs for 2008 and 2018 were calculated and mapped using Arc GIS 10.1 software. Multiple ring buffers were created from the central point of the city towards the peripheral areas having 500m intervals and calculated the density of the population of each buffer for the analysis. The results revealed that; the density of the population was 1073Km² in 2008 and it was 733Km² in the first 500m close to the center. The population density of the 2nd ring (500-1000m) in 2008 was 1603km² while the density was 1344 Km² in 2018. In the 3rd ring population density was 1773 Km² in 2008 and 1644 Km² in 2018. During the past 10year period the population density of 1.5km from the city centre observed decreasing. However, in the fourth ring, it was observed an increase in population density in 2018 than 2008 showing that 1336 Km² and 1228 Km² respectively. In the 5th ring also showed the same pattern indicating 1083 Km² in 2008 and 1250 Km² in 2018. Overall, the population density of the polgahawela city area shows two considerable segments from the city center to the peripheral area. In the first segment, the density of the population showed a decreasing pattern of up to 1.5km. The second segment (1.5km to 2 km) showed an increasing pattern of the population.

Keywords: Density, Population

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