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### **Analysis of commuter traffic trends in Colombo**

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Roads in Colombo City have become increasingly congested, especially during the peak hours. An enormous number of vehicles enter Colombo city during the morning peak hours and leave during the evening peak hours. However, there is little knowledge about the number of vehicles, their composition and the number of passengers entering or leaving the Colombo city and also on the contribution of each transport corridor radiating from Colombo. This information is vital for many professionals and organizations that deal with planning, designing, operation and maintenance of transportation related aspects, and for other areas such as land use, environmental aspects, and new developments. Unfortunately this vital information or updated analysis is not readily available due to two main reasons: the complicated nature of the road network with many corridors contributing to commuter traffic, and the high resource requirements for data collection. Thus, the main objectives of this study were to identify and analyse the commuter traffic entering Colombo for various reasons.

There are two main modes of access into Colombo city: the road transport system and the railway system. Most traffic entering Colombo uses the national road network. There are 5 "A" class roads catering to Colombo and seven other "B" class roads. In addition, a few other roads also carry heavy traffic to Colombo, although they are not categorized as national roads under national road classification system. From all these corridors on an average day over 190,000 vehicles come into Colombo; about 64% through "A" class roads. During the peak hours more than 67,000 vehicles enter Colombo which is 35% of the daily traffic flow. When vehicles type is considered, the majority of the vehicles coming into Colombo city are motor cycles (25%), cars (23%), three wheelers (21%) and vans (18%). Buses contribute little to the number of vehicles (5%) though they carry more passengers. Approximately 605,000 passengers enter Colombo through this transportation mode (road network) and highest contribution is from buses (49%). Vans carry about 17% and cars and three wheelers carry about 12% each.

Further analysis identified unique features in each corridor. For example, the percentage of cars on certain corridors is high compared to the others, especially where the rail option is not available or not satisfactory. For an example, Nawala road, High level road and Horana road carry more cars compared to other corridors and thus if an alternative transport mode is provided, this could reduce traffic to a certain level. The proportion between peak and whole day contribution also vary from corridor to corridor. When Galle road is considered, the contribution for daily traffic is 11%, but during the peak time contribution has come down to 6% showing a significant difference.

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