1. TRC13CETRP2_Effect of Traffic Characteristics on GHG Emissions

For the estimation of pollution loads, the traffic loads in terms of Vehicle Kilometers Travelled (VKT) on the entire primary road network of Trivandrum city was first estimated. On the basis of classified' volume survey conducted on 40 road links, extensive data on traffic flows on the road, network of city was generated (Fig.1). Thus, the total VKT was found out by considering all major links employing this data, the total pollution load was estimated for each of the pollutants *namely* CO. HC, NOx and PM (Fig.2). The future pollution loads were also predicted. To assess how the pollutants are distributed throughout the study area, the spatial distribution map of pollutants over the city was generated using ArcGIS software.

It is found from the study that CO constitutes major part of emissions from vehicles. Two wheelers contribute more to CO, HC and PM emissions whereas buses contribute much towards NOx emissions. Even though the total emissions per vehicle is more for buses, the emission per person occupied is very less. The analysis also showed that the introduction of mass rail transit would considerably reduce the amount of emissions by about 79%.

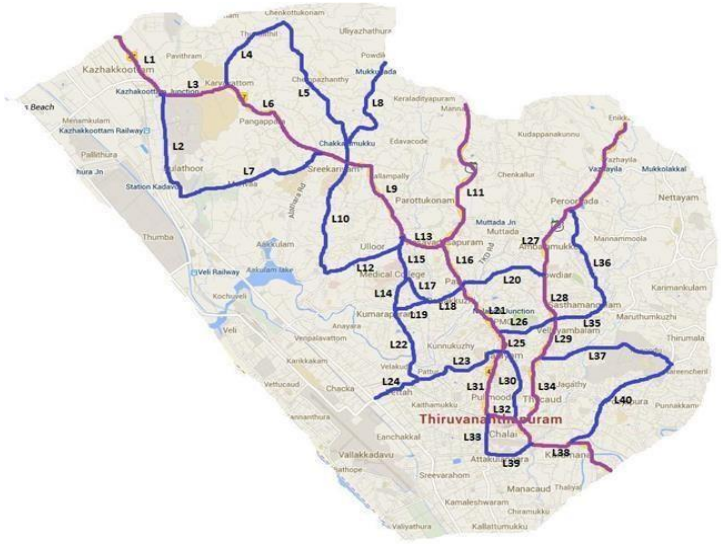

Fig.1 Study area

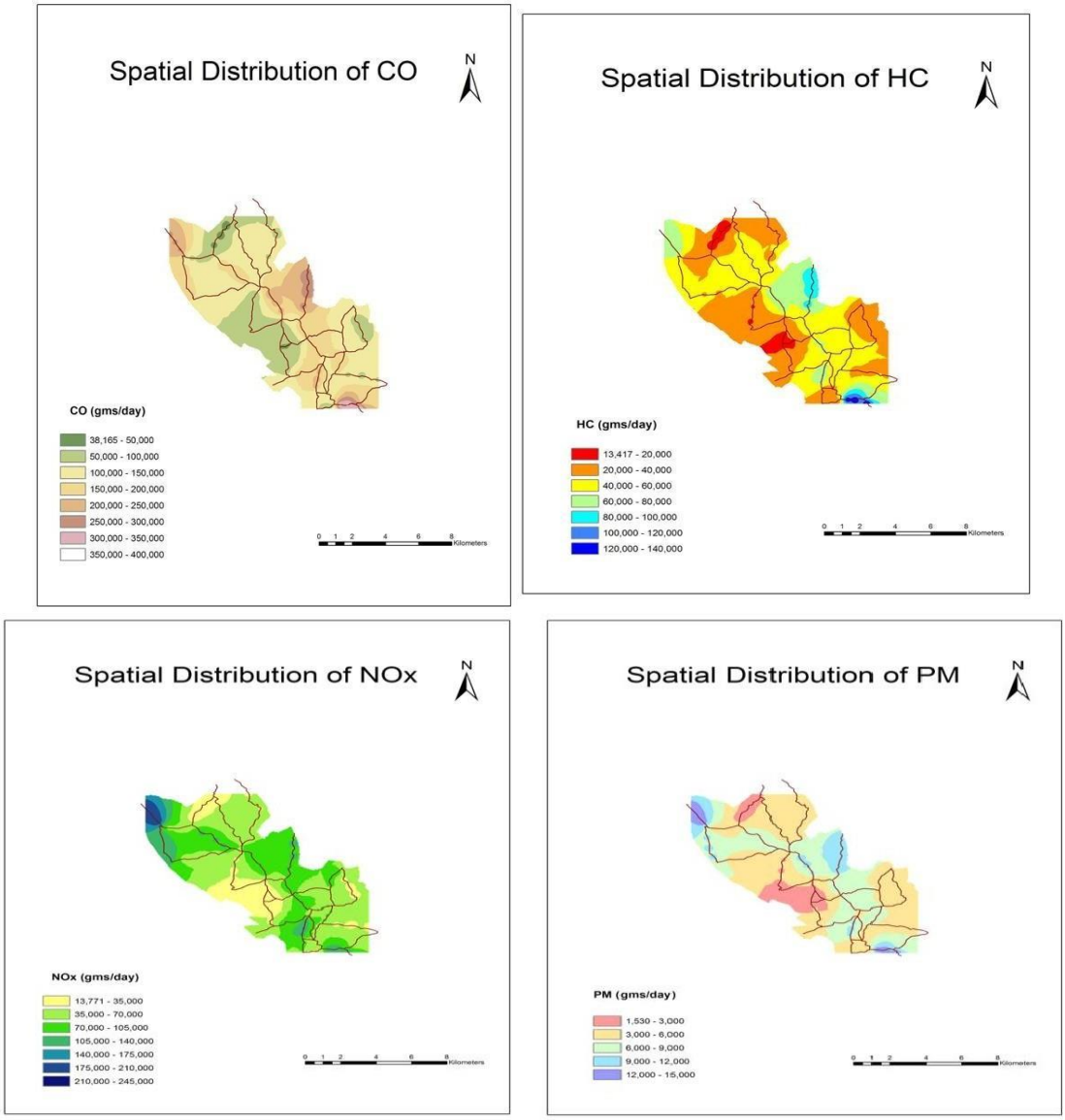

Fig.2 Thematic Maps of Different Pollutants