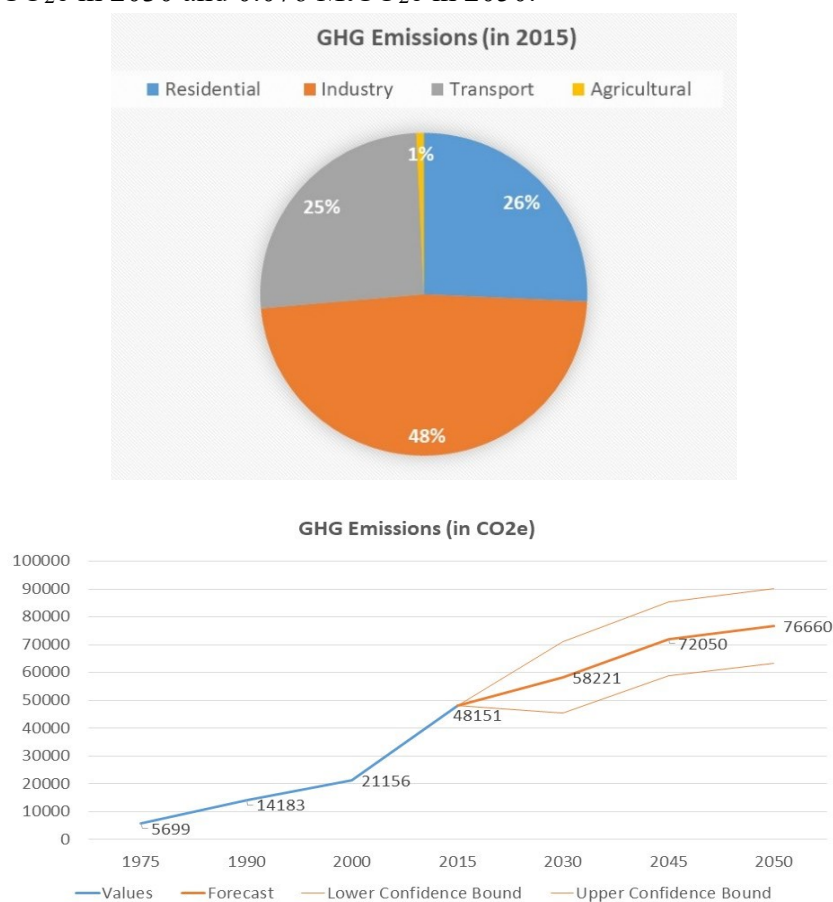


### 8.3.2 Dhaka

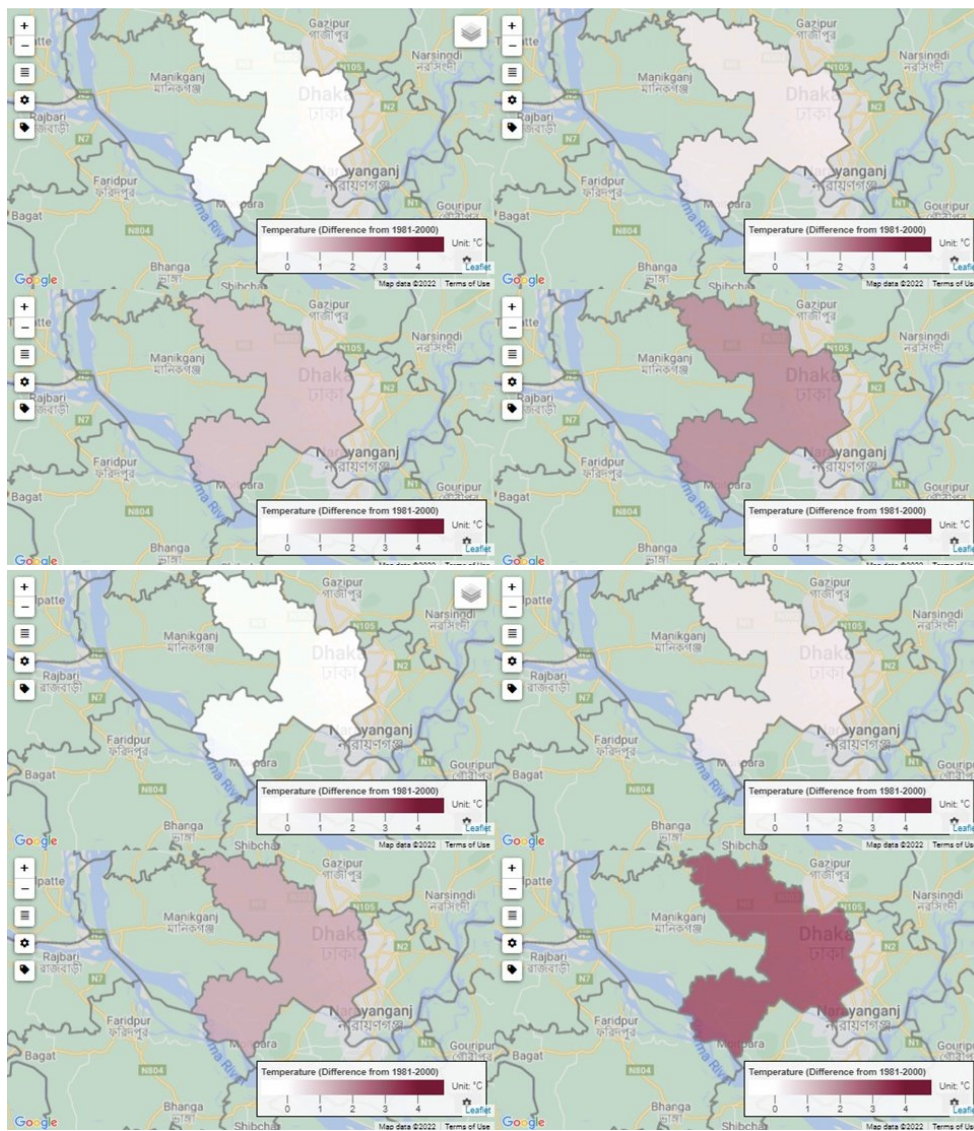
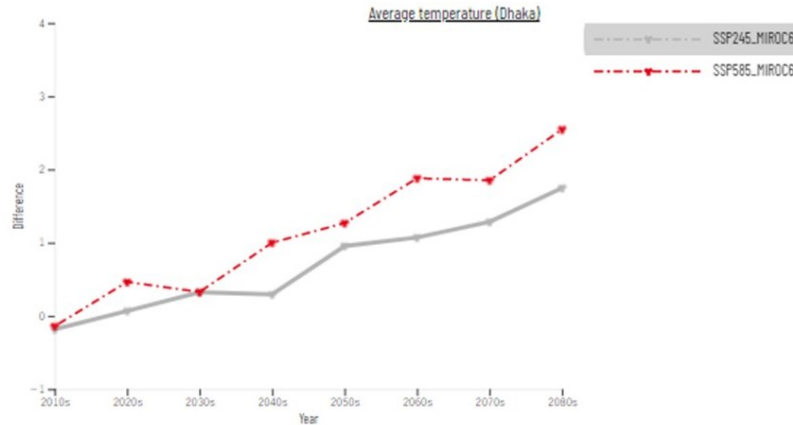
The GHG emissions of Dhaka was 0.005 MtCO<sub>2e</sub> in 1975, that escalated to 0.014 MtCO<sub>2e</sub> in 1990 and 0.048 MtCO<sub>2e</sub> in 2015. A majority of the GHG emissions in 2015 (Figure 8.7, top) were contributed by the Industry sector (48%) and Residential sector (26%), followed by transport sector (5%) and Agricultural sector (1%). As per the ICLAP model estimates (Figure 8.7, below), there would be an increase in emissions at 5.5% per annum, leading to 0.058 MtCO<sub>2e</sub> in 2030 and 0.076 MtCO<sub>2e</sub> in 2050.



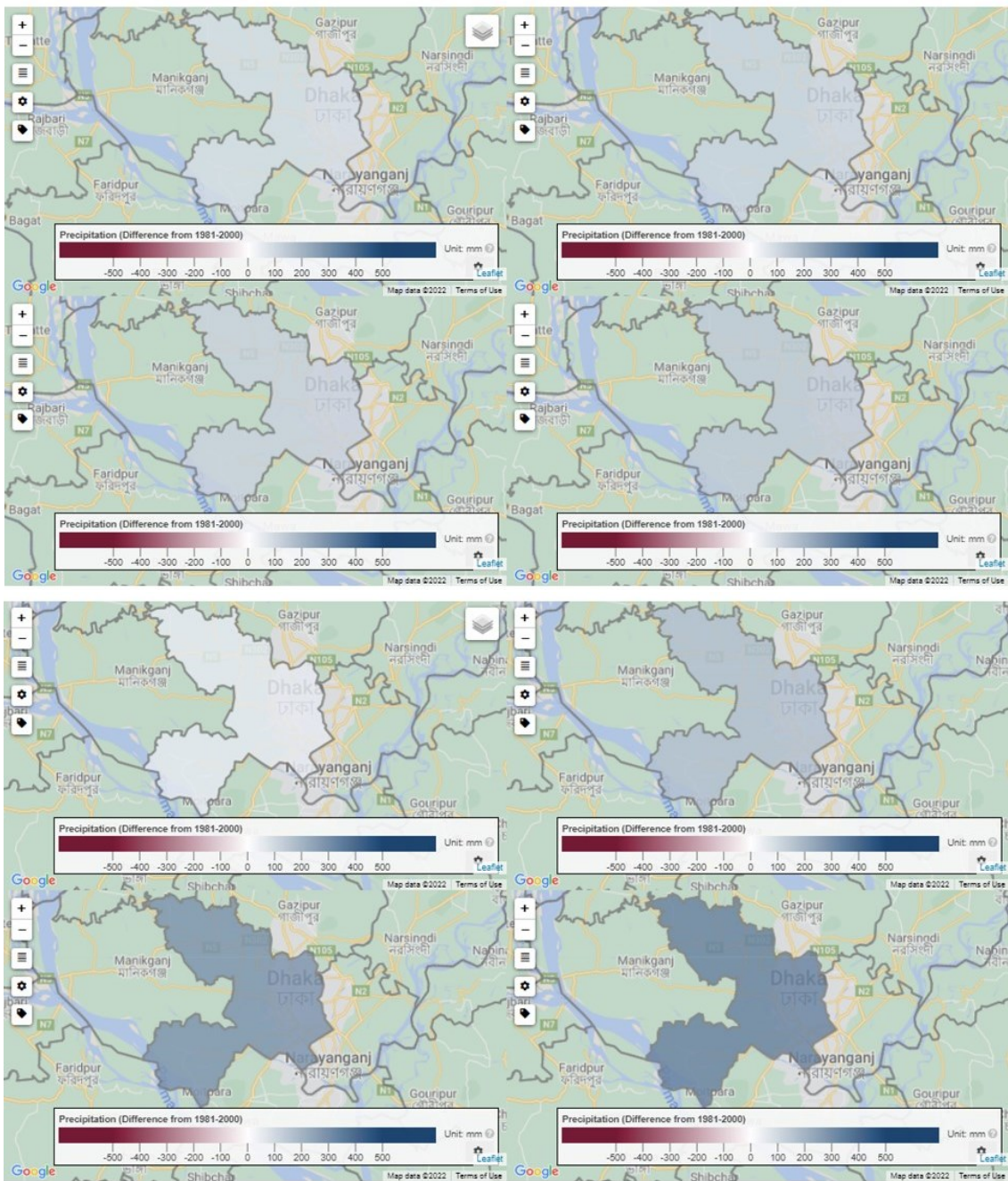
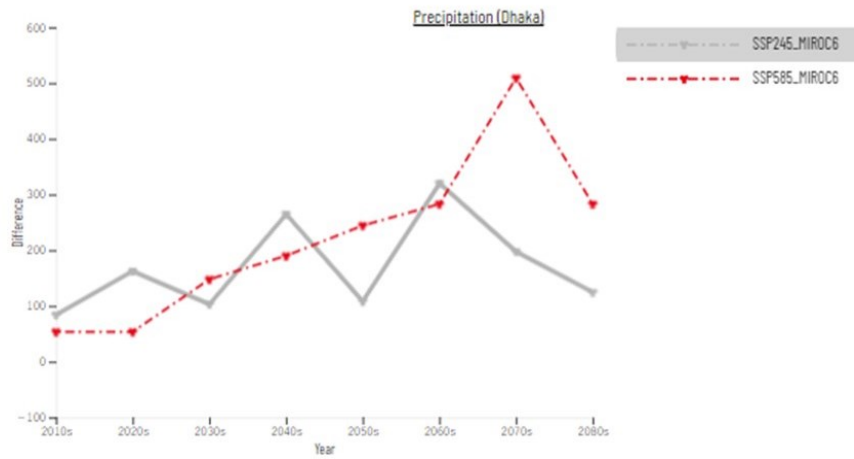
**Figure 8.7: GHG contributions from different sectors in Dhaka (top); ICLAP model estimates for Dhaka GHG emissions till 2050 (bottom)**

The results for climate variability in Dhaka indicate that depending on the emission scenarios, there would be a temperature increase of 0.25–2.5 degC from 2030–80s (Figure 8.8, top). The scenario corresponding to the pathway with moderate GHGs (SSP245\_MIROC6) exhibits an increase of 0.3 degC during 2030s (above the 1980 baseline temperature), 1.0 degC in 2050s, peaking to 1.7 degC during 2080s. The spatial results for moderate scenario over 2010–80s are mapped in Figure 8.8 (middle). Meanwhile, the scenario corresponding to the pathway with the highest GHGs (SSP585\_MIROC6) exhibits an increase of 0.3 degC during 2030s (above the 1980 baseline temperature), 1.2 degC in 2050s further rising sharply to 2.4 degC above normal up to 2080s. The spatial results for high emission scenario over 2010–80s are mapped in Figure 8.8 (bottom). Meanwhile, the precipitation change for Dhaka shows extreme variability in the long run, ranging from 80 mm to 510 mm from the normal (Figure 8.9 top) depending on the emission scenarios. The scenario corresponding to the pathway with moderate GHGs (SSP245\_MIROC6) exhibits an increase of about 80 mm in 2030s (above the 1980 baseline rainfall), unevenly increasing

to 90 mm in 2050s and 110 mm in 2080s. The spatial results for moderate scenario over 2010-80s are mapped in Figure 8.9 (middle). Meanwhile, the scenario corresponding to the pathway with the highest GHGs (SSP585\_MIROC6) shows Dhaka city rainfall increase to around 150mm (above the 1980 baseline rainfall) in 2030s, up to 240 mm in 2050s, and about 510 mm during 2070s and declining to 280 mm in 2080s. The spatial results for high emission scenario over 2010-80s are mapped in Figure 8.9 (bottom).



**Figure 8.8: Temperature increase in Dhaka under medium (grey) and high (red) emission scenario till 2080s (top); Spatial results for medium scenario for 2010s, 2030s, 2050s, 2080s (middle); Spatial results for high scenario for 2020s, 2030s, 2050s, 2080s (bottom)**



**Figure 8.9: Precipitation variation in Dhaka under medium (grey) and high (red) emission scenario till 2080s (top); Spatial results for medium scenario for 2010s, 2030s, 2050s, 2080s (middle); Spatial results for high scenario for 2020s, 2030s, 2050s, 2080s (bottom)**