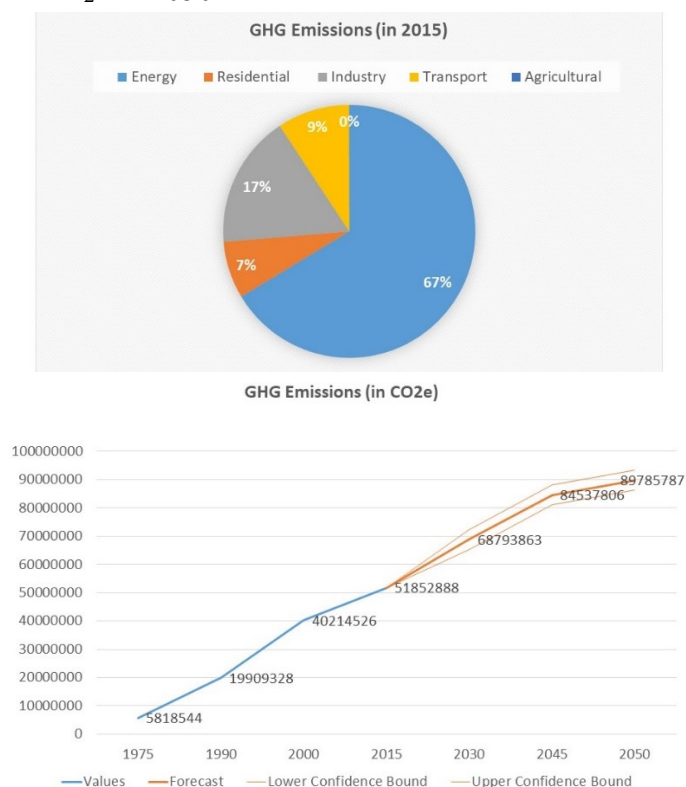


### 6.3.7 New Delhi

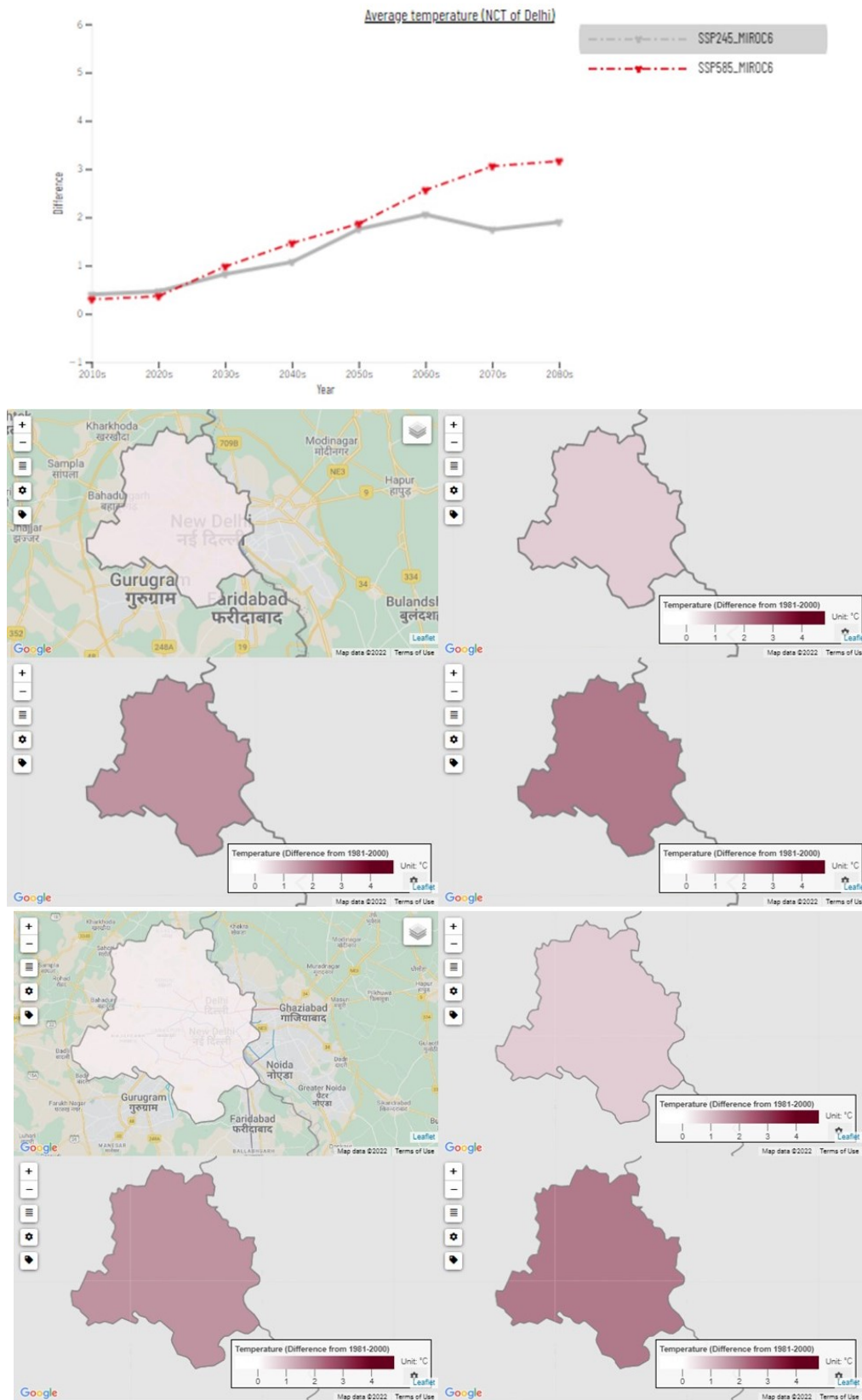
The GHG emissions of New Delhi was 5.82 MtCO<sub>2e</sub> in 1975, that escalated to 19.9 MtCO<sub>2e</sub> in 1990 and 40.2 MtCO<sub>2e</sub> in 2015. A majority of the emissions in 2015 (67%) were contributed by the energy sector (Figure 6.19, top), followed by industry (17%) and transport sectors (9%). On the other hand, GHG emissions from the residential sector (7%) and agricultural sector (~0%) are miniscule. As per the ICLAP model estimates (Figure 6.19, bottom), there would be an increase in emissions at 5.6% per annum, leading to 68.8 MtCO<sub>2e</sub> in 2030 and 89.8 MtCO<sub>2e</sub> in 2050.



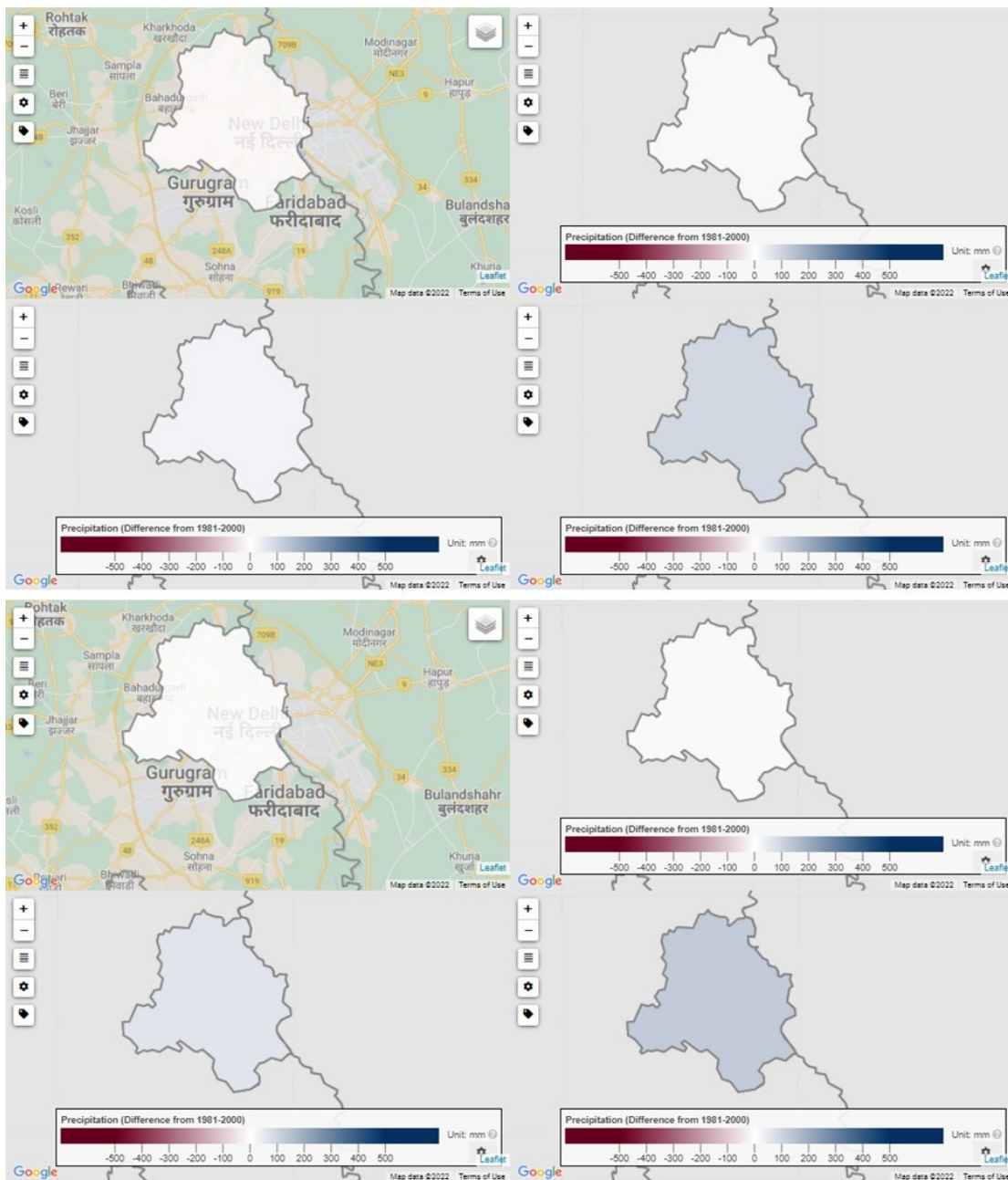
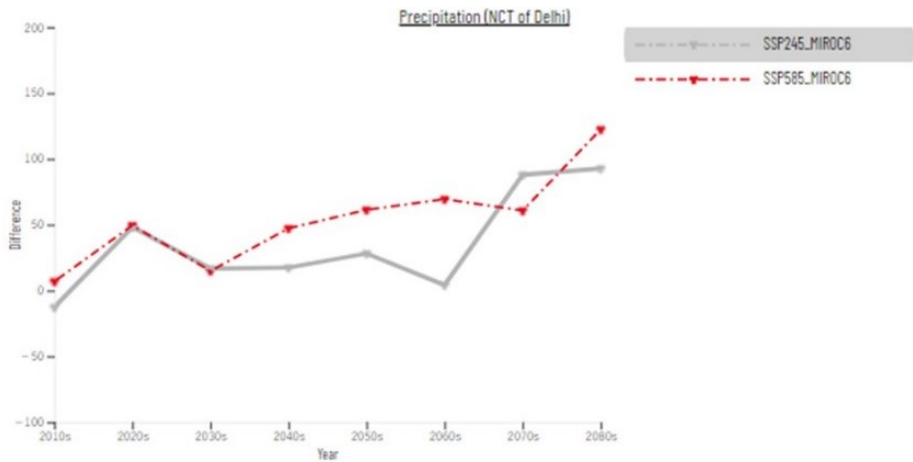
**Figure 6.19: GHG contributions from different sectors in New Delhi (top); ICLAP model estimates for New Delhi's GHG emissions till 2050 (bottom)**

The results for climate variability in New Delhi indicate a temperature increase of 1.5–3.0 degC in the long run (Figure 6.20, top) depending on the emission scenarios. The scenario corresponding to the pathway with moderate GHGs (SSP245\_MIROC6) exhibits an increase of 0.7 degC in 2030s (above the 1980 baseline temperature) to 1.7 degC in 2050s, peaking to 2.0 degC during 2060s and re-stabilizing to 1.8 degC by 2080s. The spatial results for moderate scenario over 2010-80s are mapped in Figure 6.20 (middle). Meanwhile, the scenario corresponding to the pathway with the highest GHGs (SSP585\_MIROC6) exhibits an increase of 1.0 degC in 2030s (above the 1980 baseline temperature), 1.8 degC in 2050s further consolidating around 3.0 degC above normal in 2070-80s. The spatial results for high emission scenario over 2010-80s are mapped in Figure 6.20 (bottom). Meanwhile, the precipitation variation for New Delhi ranges from 70–120 mm in the long run (Figure 6.21, top) depending on the emission scenarios. The scenario corresponding to the pathway with moderate GHGs (SSP245\_MIROC6) exhibits an increase of 10 mm in 2030s (above the 1980 baseline rainfall) to 20 mm in 2050s, dipping to 10 mm below average in 2060s increasing again to over 80mm in 2070-80s. The spatial results for moderate scenario over 2010-80s are mapped in Figure 6.21 (middle). Meanwhile, the scenario corresponding to the pathway with the highest GHGs

(SSP585\_MIROC6) exhibits an increase of 15 mm in 2030s (above the 1980 baseline rainfall), 50 mm in 2050s and 120 mm in 2070-80s. The spatial results for high emission scenario over 2010-80s are mapped in Figure 6.21 (bottom).



**Figure 6.20: Temperature increase in New Delhi 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 6.21: Precipitation variation in New Delhi 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)**