**List of Figures**

**Fig. 1** Map of the study area

**Fig. 2** Map of the road network in the Niger Delta used for the construction of the NDEI. Inset shows road network map in Benin City, one of the main cities in the Niger Delta

**Fig. 3** Map of the 6,715 settlements identified in the Niger Delta for the construction of the NDEI

**Fig. 4** 10 km x 10 km grid based emission inventory for CO emissions from point sources. The unit of CO emission is thousands of tonnes per year (‘000 Tonnes/Year)

**Fig. 5** 20 km x 20 km grid based emission inventory for CO emissions from point sources. The unit of CO emission is thousands of tonnes per year (‘000 Tonnes/Year)

**Fig. 6** 10 km x 10 km grid based emission inventory for NOx emissions from road network. The unit of NOx emission is millions of tonnes per year

**Fig. 7** 20 km x 20 km grid based emission inventory for NOx emissions from road network in the Niger Delta. The unit of NOx emission is millions of tonnes per year

**Fig. 8** Map showing the 10 km x 10 km grid distribution of PM10 emissions from settlements in the Niger Delta. The unit of PM10 emission is tonnes per year (Tonnes/Year)

**Fig. 9** Map showing the 20 km x 20 km grid distribution of PM10 emissions from settlements in the Niger Delta. The unit of PM10 emission is tonnes per year (Tonnes/Year)