Appendix A. Supplementary data

Nitrogen oxides (NO and NO_2) pollution in the Accra metropolis: Spatiotemporal patterns and the role of meteorology

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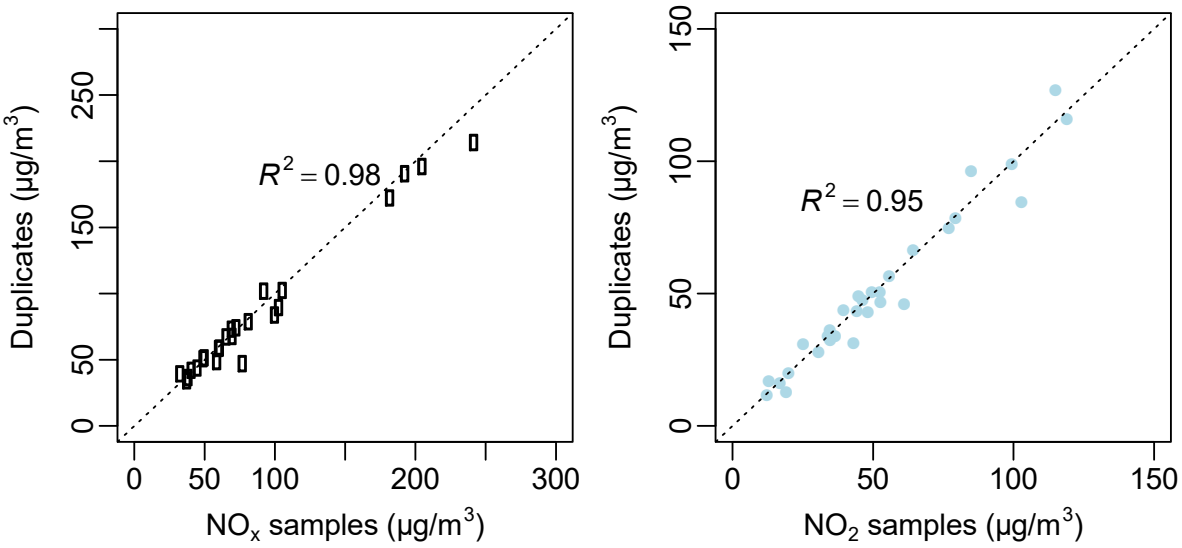
*** Color does not need to be used for any figures in print.



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742 **Figure S1.** Correlation test between samples and duplicates.

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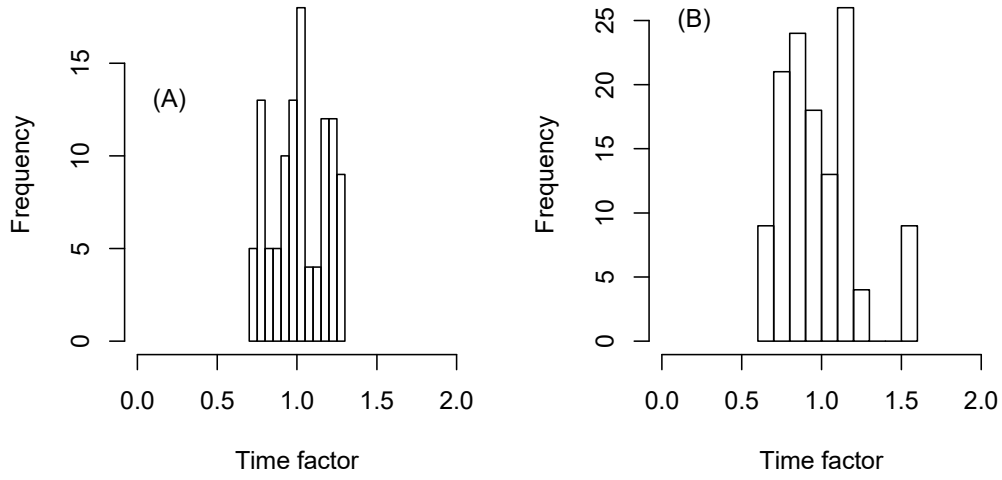

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746 **Figure S2.** Histogram of time correction factor of NO (A) and NO_2 (B) for temporal adjustment.
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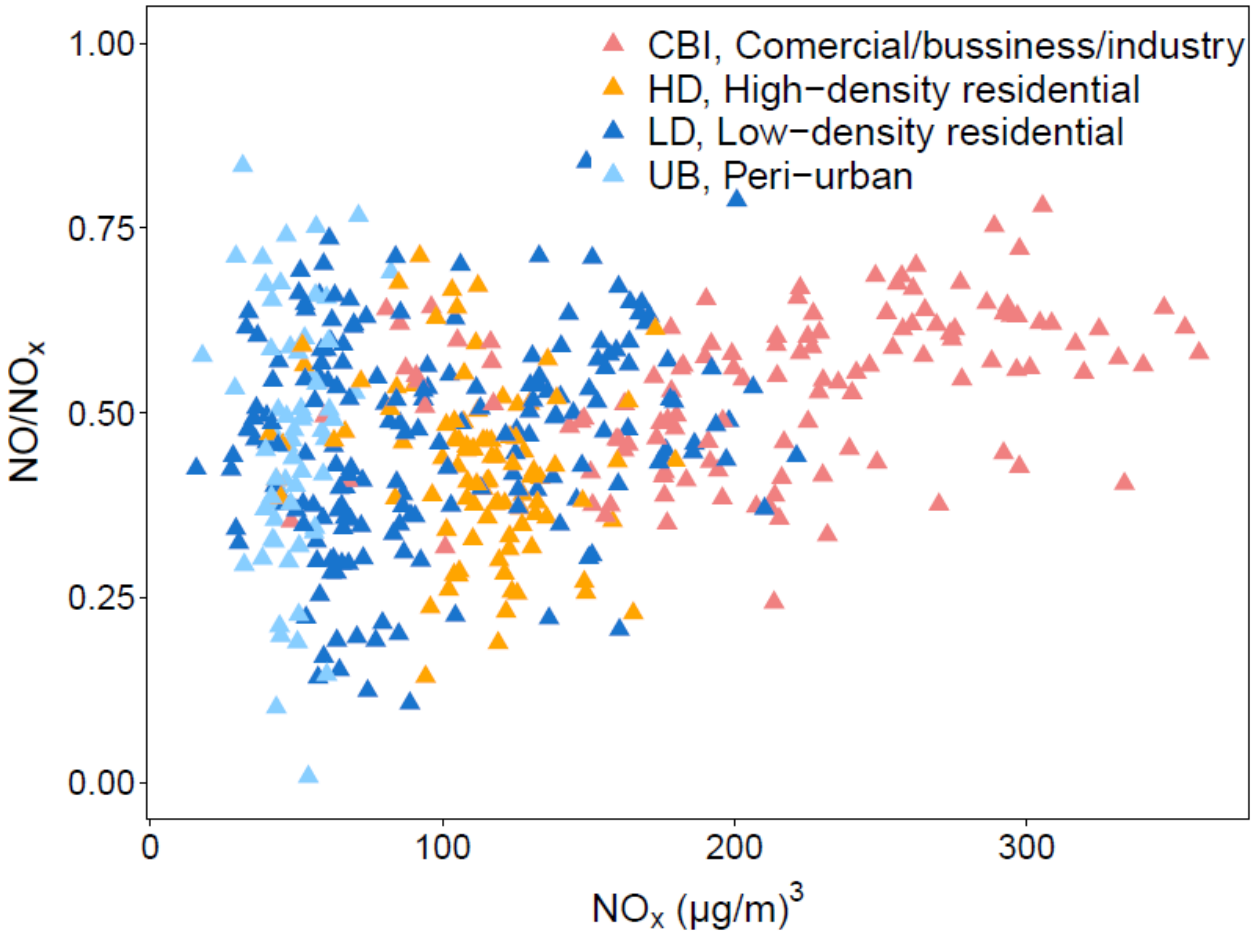

Figure S3. Scatter plot of NO/NO_x ratio with NO_x concentrations.

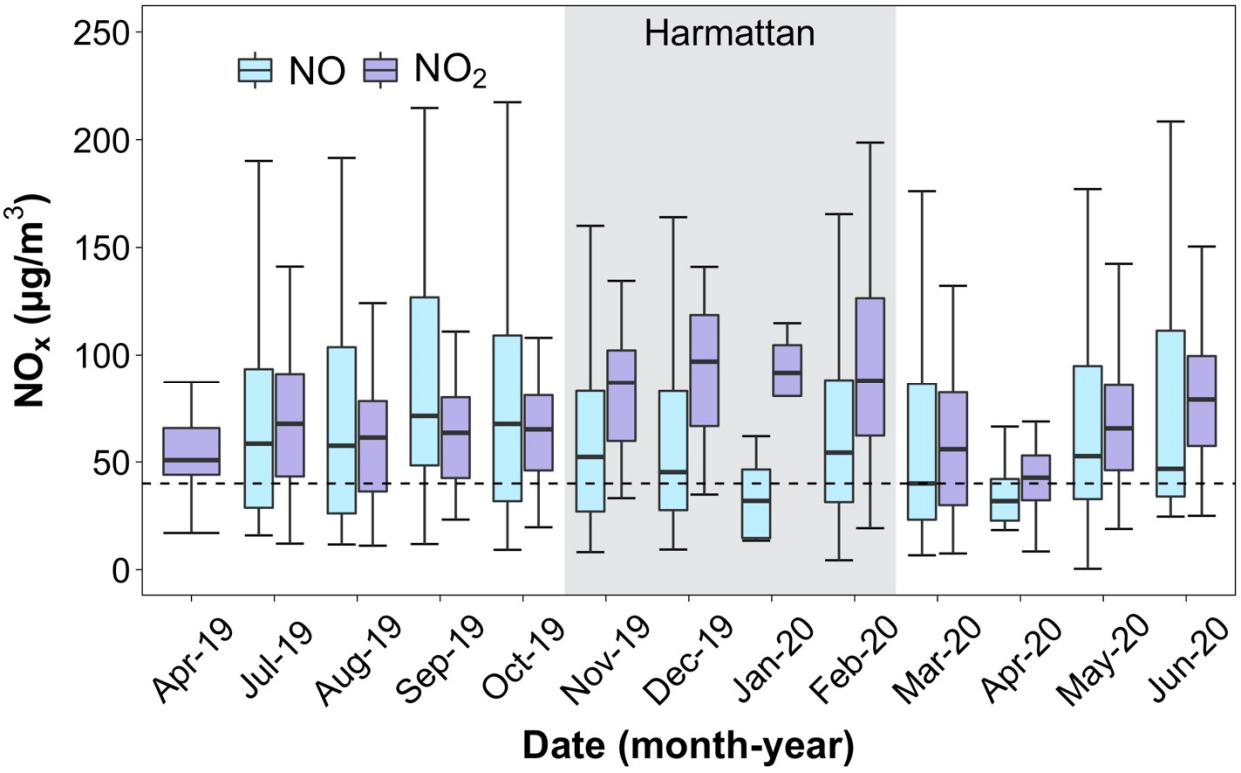

Figure S4. Monthly average concentrations of NO and NO_2 at all fixed sites. The dash line indicate the WHO annual guideline of 40 µg/m^3 for NO_2. Here, we included pilot NO_2 data collected in April.

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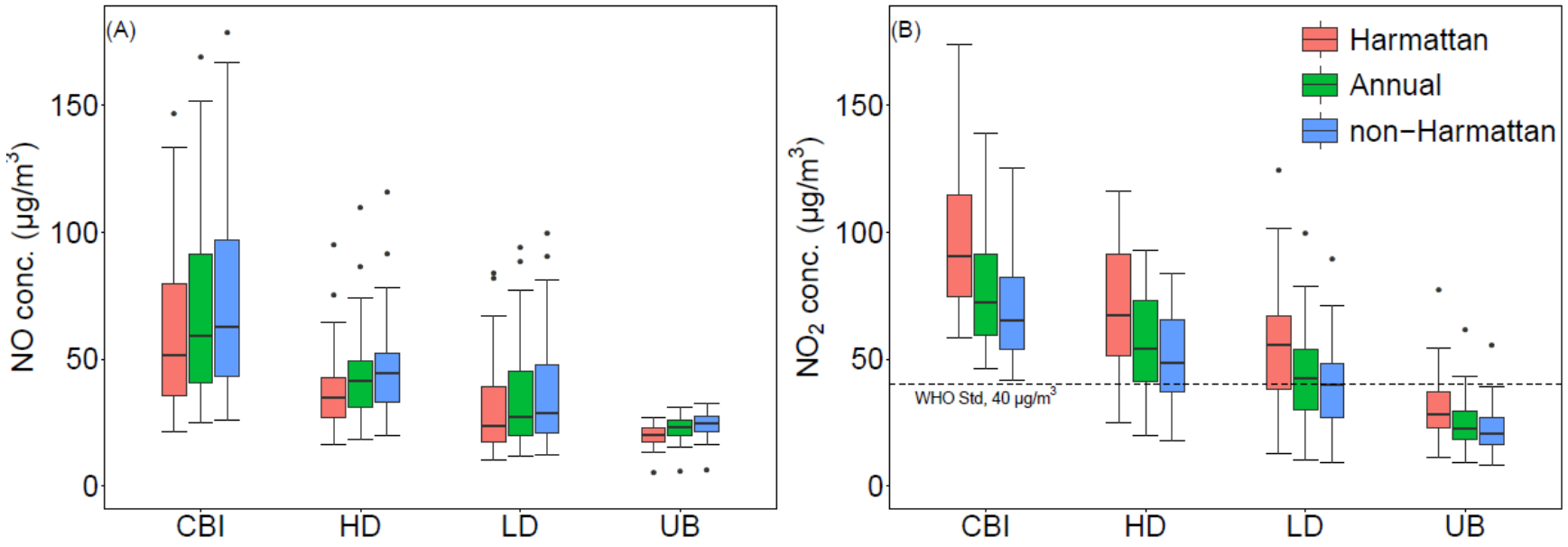

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761 Figure S5. Annual and seasonal mean NO_2 and NO concentrations by site-types: commercial/business/industry (CBI), high-density
762 residential (HD), low-density residential (LD) and urban background (UB) sites. The input data represent seasonal and annual mean
763 equivalents for all monitoring sites.

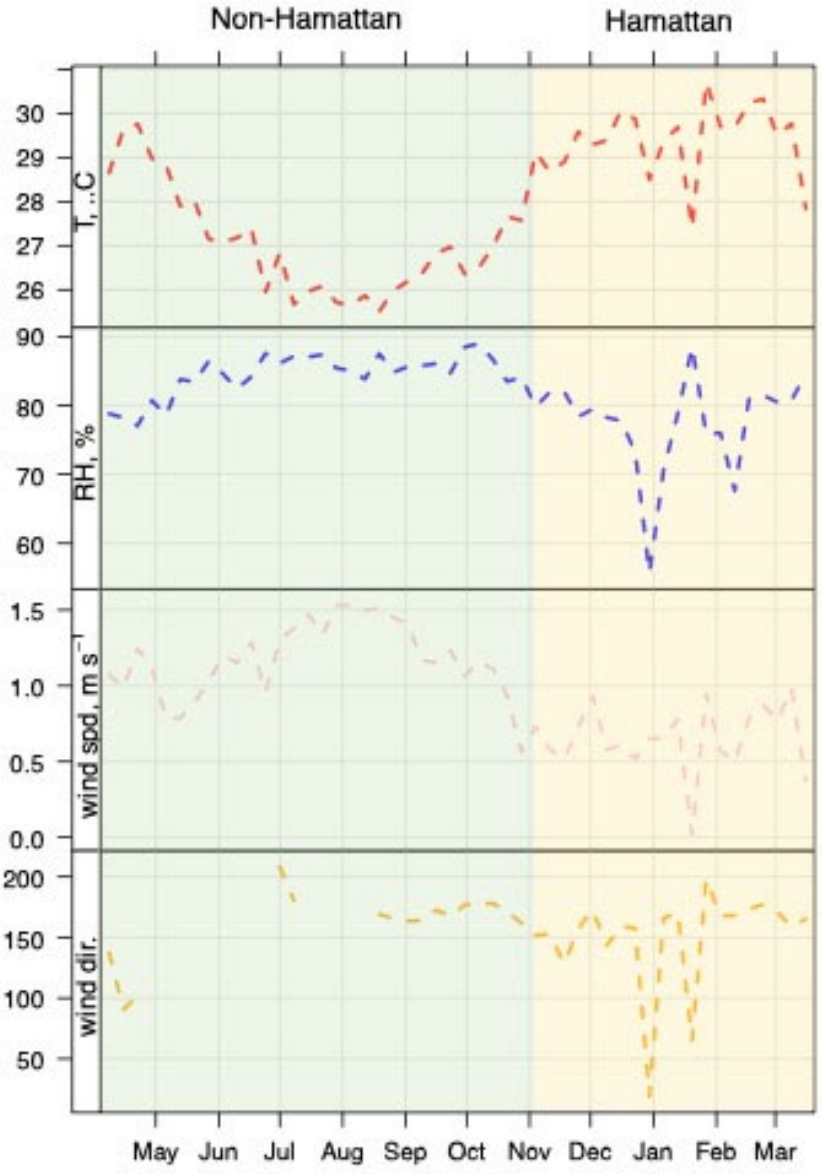

Figure S6. Time series of meteorological parameters (temperature, relative humidity, wind speed and wind direction) in Accra from April 2019 to March 2020. The light green shade covers non-Harmattan period, and the light orange shade covers Harmattan period.

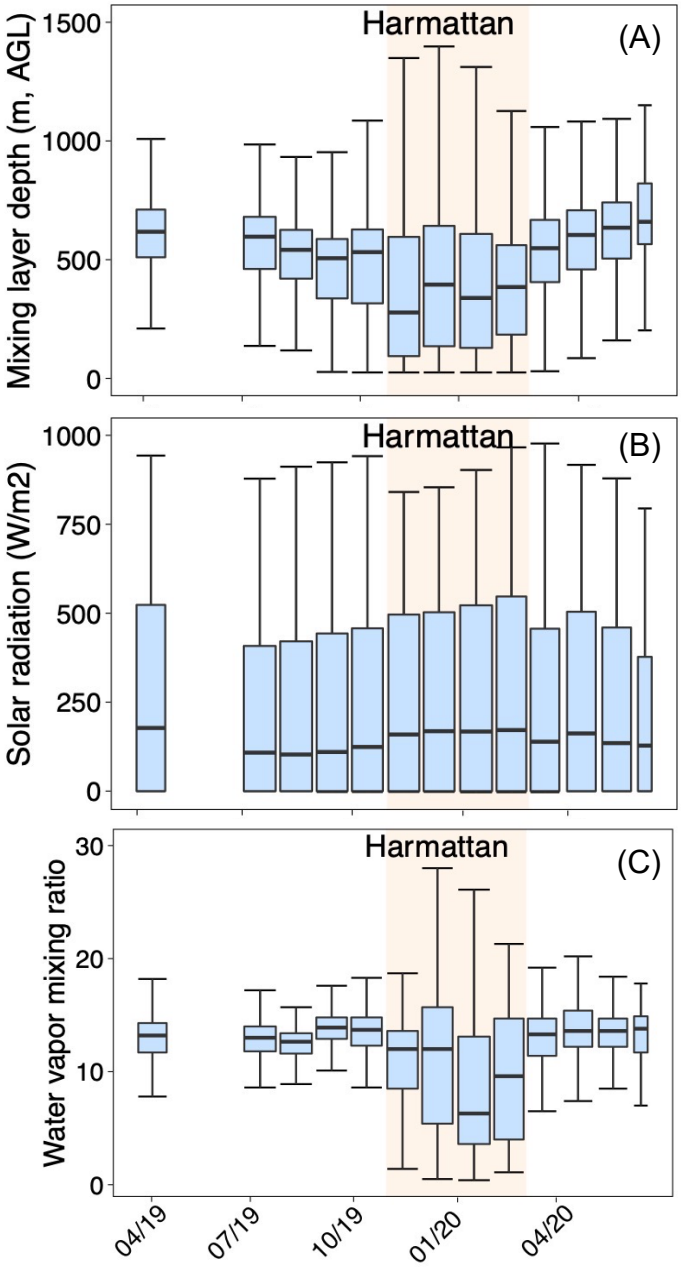

Figure S7. Monthly mixing layer depth (m, above ground level) (A) Incident solar radiation, and (B) Water vapor mixing ratio (C) during the full campaign period. The line in the box represents the median.

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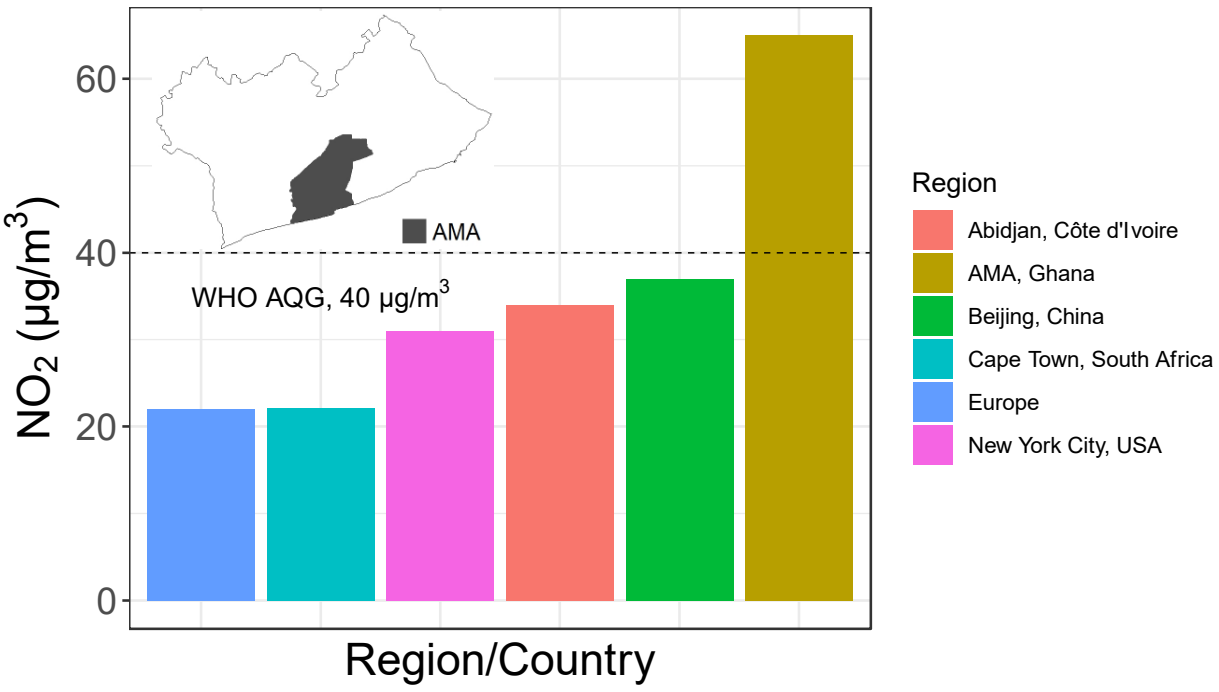

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778 **Figure S8**. Comparison of annual mean NO_2 concentrations in Accra Metropolitan Area (AMA)
779 and other cities/regions in the world. The dash line is the WHO guideline for annual
780 concentrations of NO_2 (40 ug/m^3).
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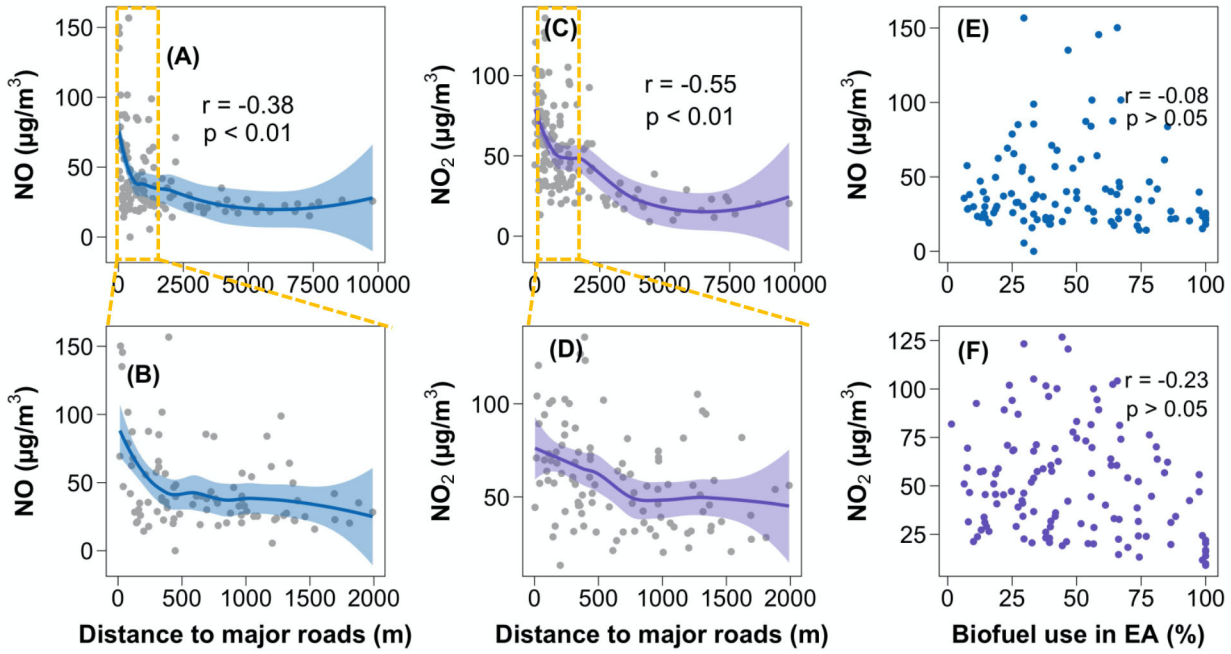

Figure S9. Relationship between NO_x concentrations and (A ~D) distance to major roads, and (E~F) biomass use percentage in enumeration area (EA) containing the monitoring locations. The smooth trend method is loess, and the shade areas are the standard errors. The road network data was downloaded from OpenStreetMap (2019). We caution that the 2010 census biomass use data may not reflect present usage (Ghana Statistic Service, 2010).