

Threshold-driven responses of air pollutants and greenhouse gases to meteorological conditions

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Figure S2. Distributions of meteorological variables used to define regime thresholds. Violin plots show the full distributions of daily ERA5 temperature, wind speed, boundary layer height, and solar radiation for each regime and city. Dashed lines indicate percentile-based thresholds used for classification. These distributions confirm physical separation among regimes and robustness of the threshold-based framework.

Figure S3. Pearson correlation matrices between meteorological variables, ventilation index, and pollutant concentrations for Agra and Delhi NCR. Colors indicate Pearson correlation coefficients computed using daily data. Correlations reflect co-variability rather than causality and are shown separately for each city to highlight regional differences in meteorology–pollution coupling.

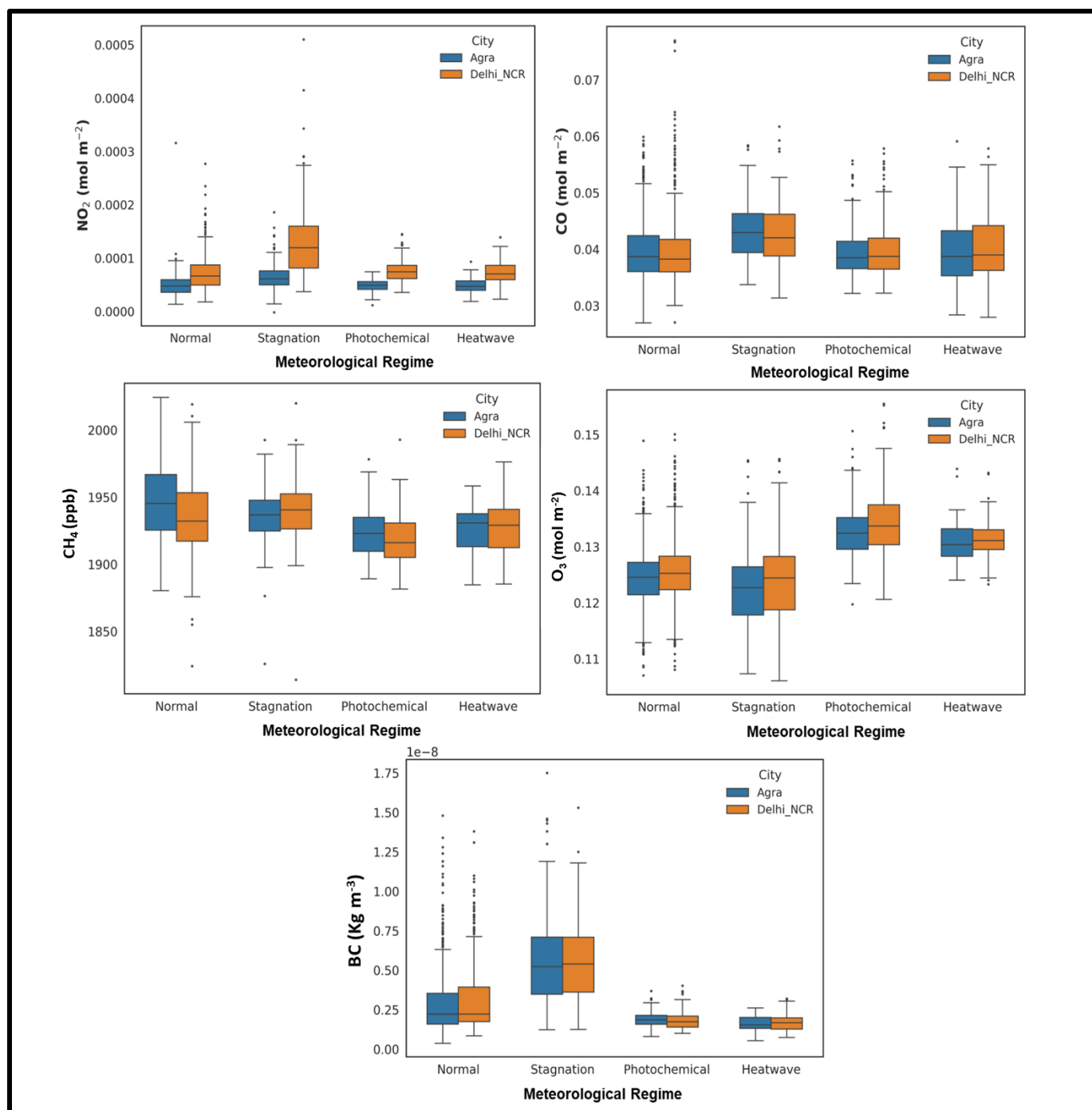
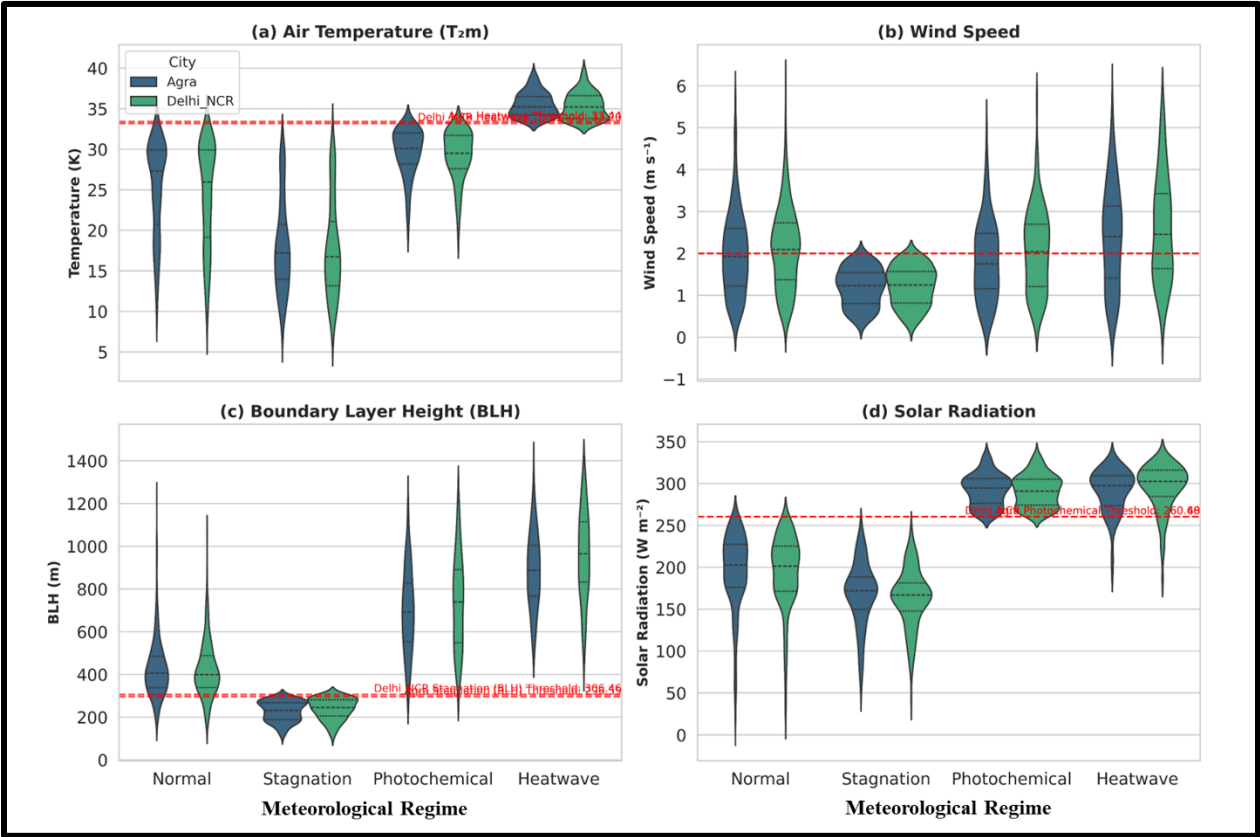


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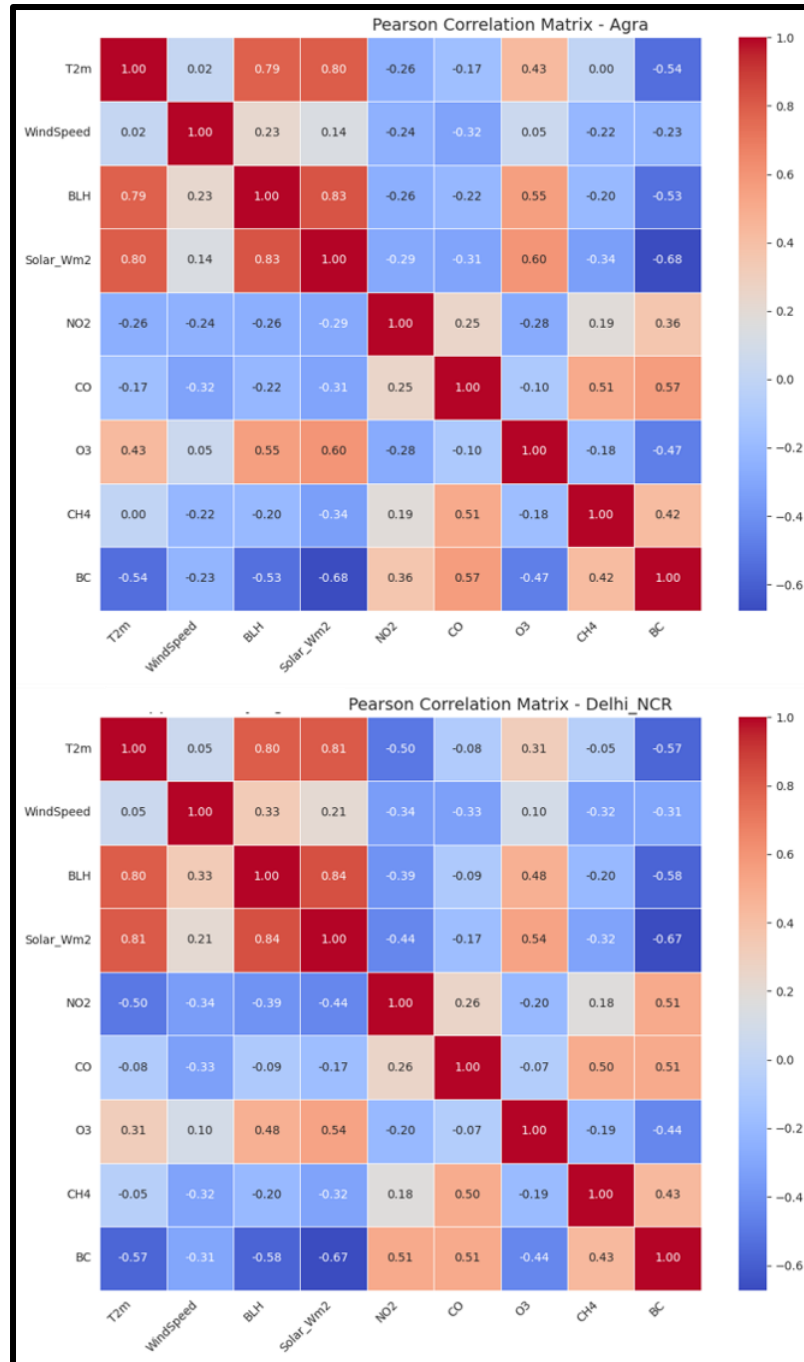


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