Influence of vegetation on occurrence and time distributions of regional new aerosol particle formation and growth

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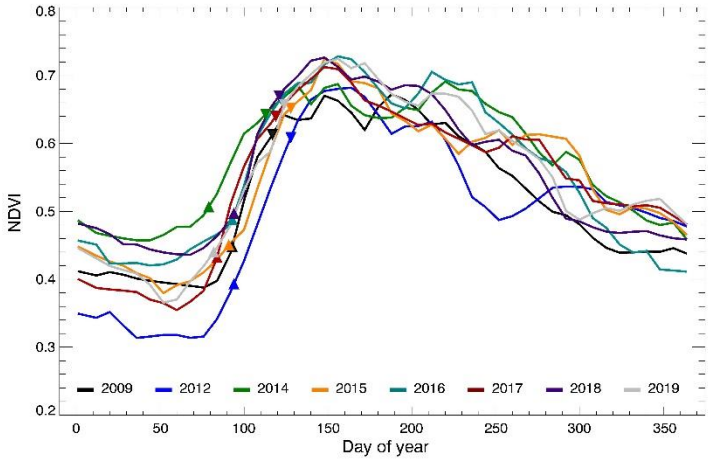

Figure S1. Time variation of satellite-based Normalized Difference Vegetation Index (NDVI) and the start of spring (upper triangle) and end of greening (lower triangle) considering all vegetation types in a circular geographical area with a radius of 100 km around Budapest for the measurement years.

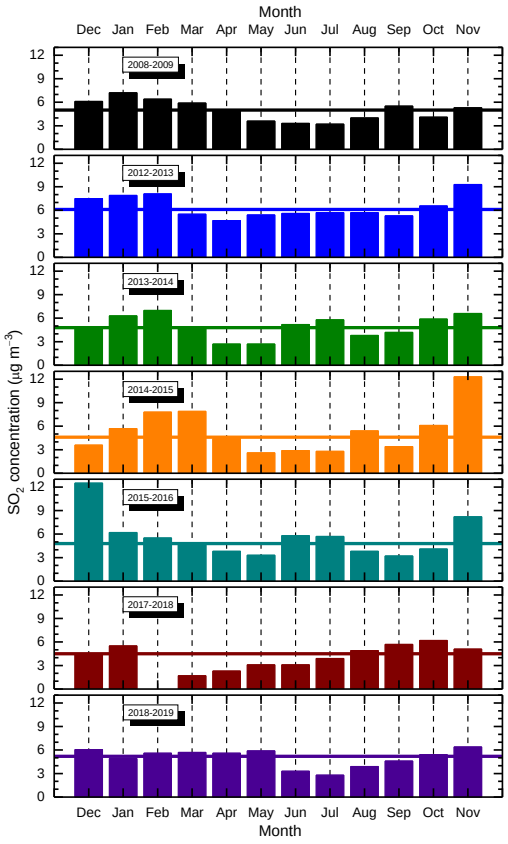

Figure S2. Distributions of monthly median SO_2 concentration for the seven measurement years. The horizontal lines indicate annual medians. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

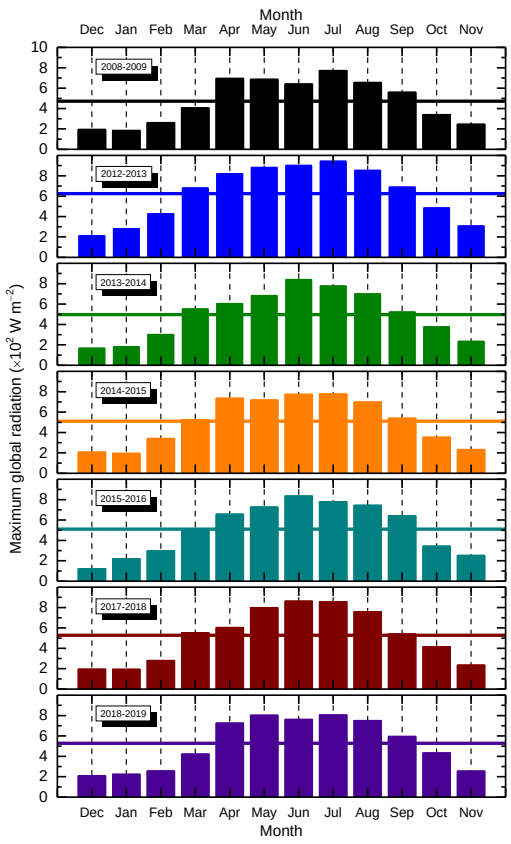

Figure S3. Distributions of monthly mean value of daily maximum global radiation for the seven measurement years. The horizontal lines indicate annual means. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

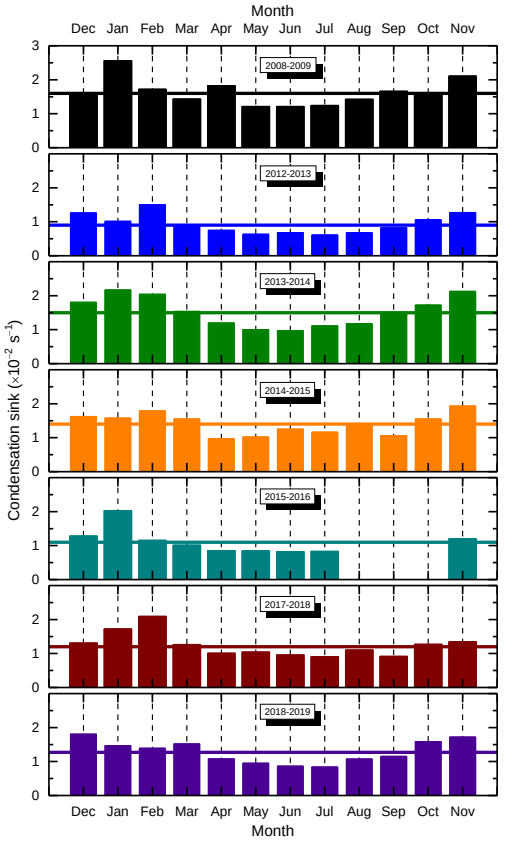

Figure S4. Distributions of monthly mean condensation sink for the seven measurement years. The horizontal lines indicate annual medians. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

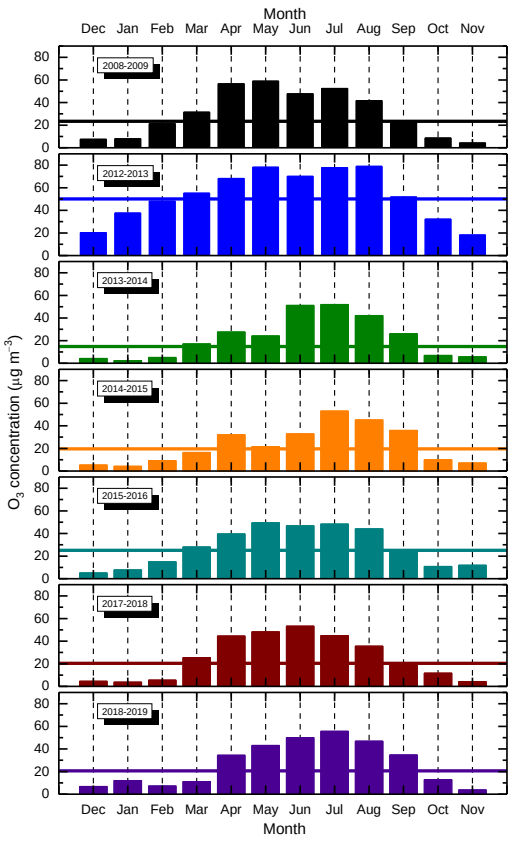

Figure S5. Distributions of monthly median O_3 concentration for the seven measurement years. The horizontal lines indicate annual medians. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

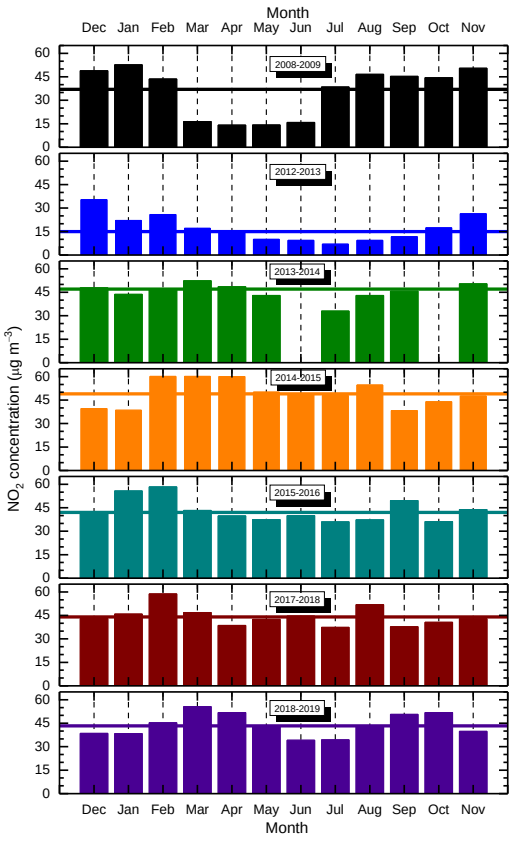

Figure S6. Distributions of monthly median NO_2 concentration for the seven measurement years. The horizontal lines indicate annual medians. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

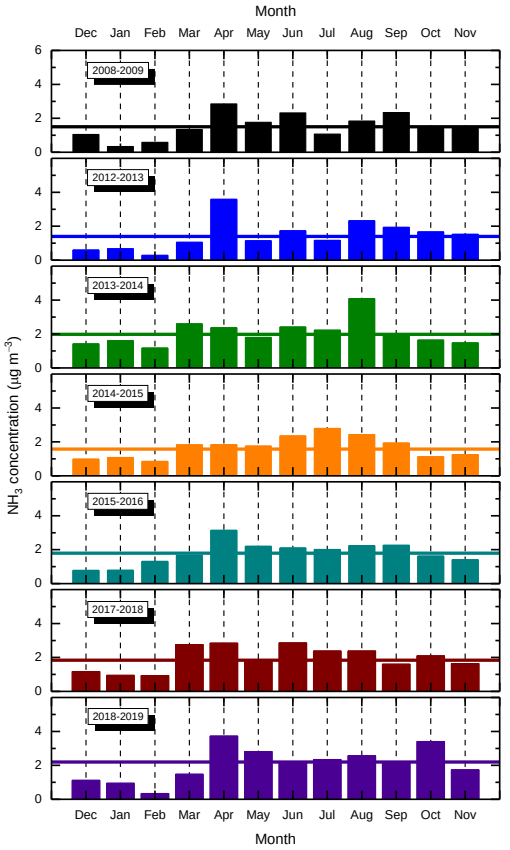

Figure S7. Distributions of monthly median NH_3 concentration for the seven measurement years. The horizontal lines indicate annual medians. The measurements were accomplished in the regional background.

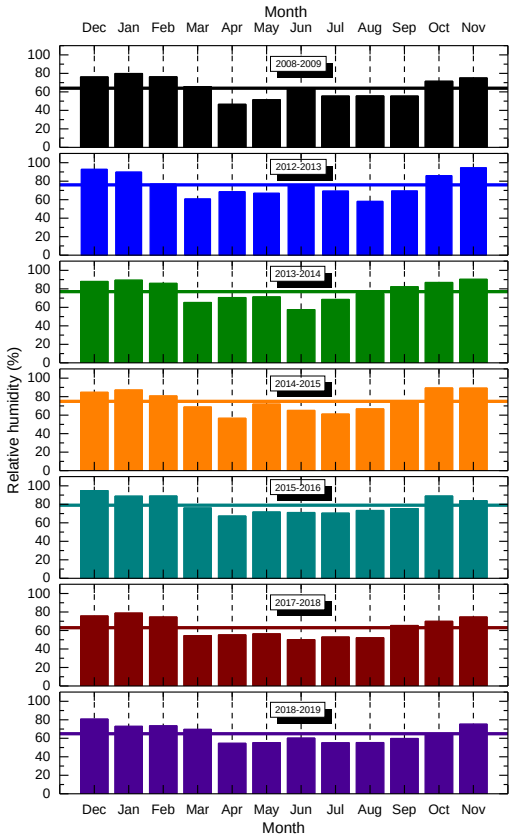

Figure S8. Distributions of monthly mean relative humidity for the seven measurement years. The horizontal lines indicate annual means. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

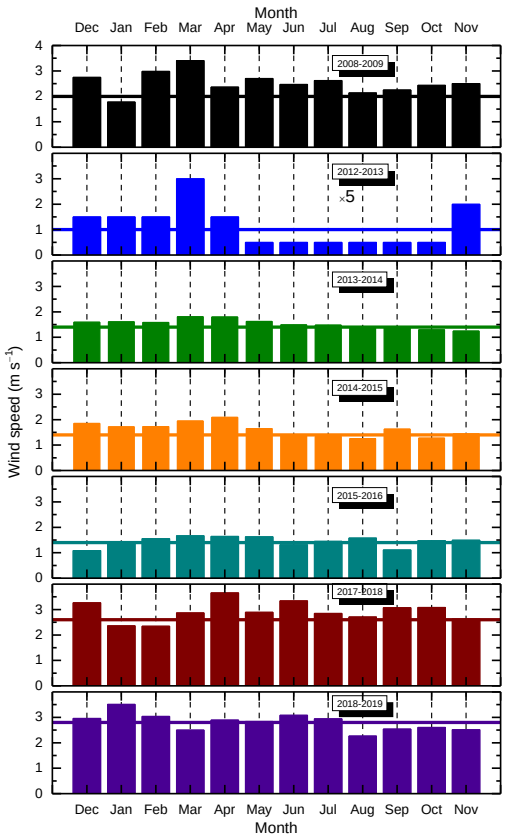

Figure S9. Distributions of monthly mean wind speed for the seven measurement years. The horizontal lines indicate annual means. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

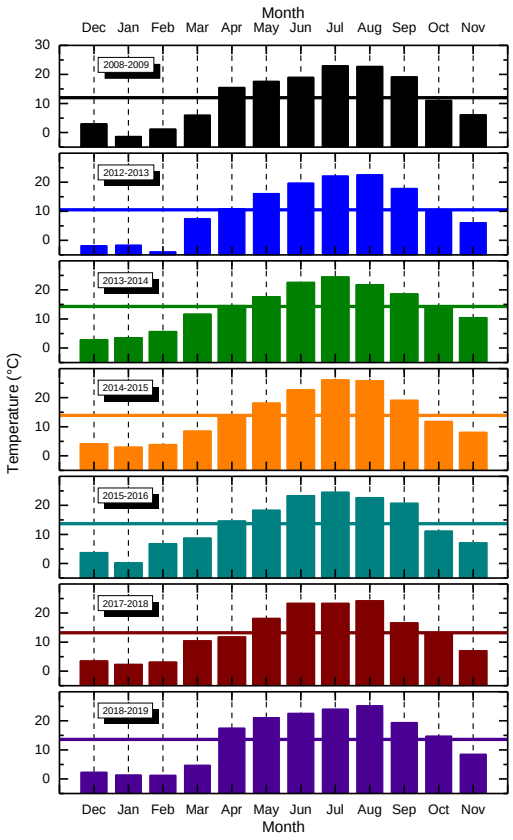

Figure S10. Distributions of monthly mean air temperature for the seven measurement years. The horizontal lines indicate annual means. The measurement year 2012–2013 was accomplished in the near-city background, while the other years were realised in the city centre.

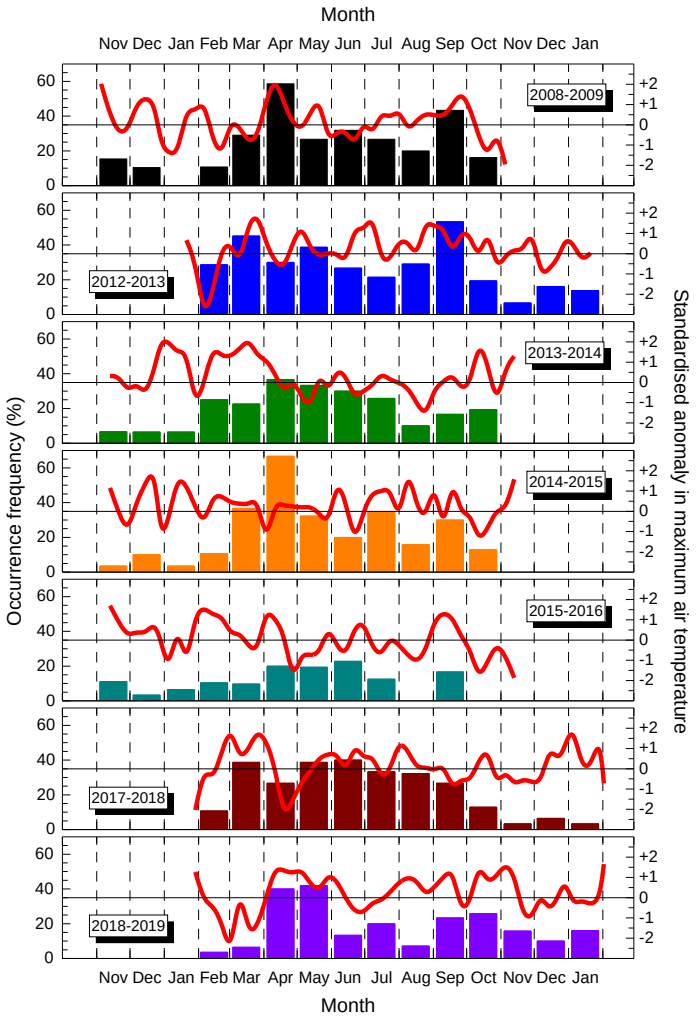

Figure S11. Time distributions of maximum air temperature anomaly standardised to annual SD above vegetated territories (red lines) and of monthly mean relative occurrence frequency of NPF event days (column charts) for the seven measurement years. The value for January 2009 is zero, while the values for August and October 2016 are not available. The measurements in 2012–2013 were performed in the near-city background, while in the other years, they were accomplished in the city centre.

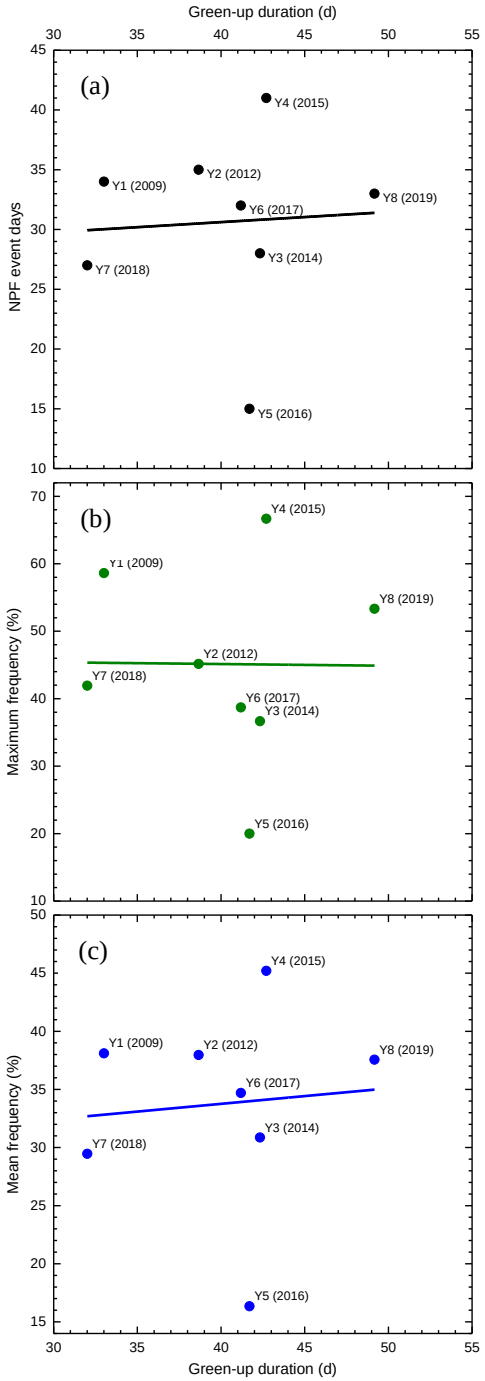

Figure S12. Scatter plots of the green-up duration for all vegetation on one side and the number of NPF event days in spring (a), monthly maximum relative NPF occurrence frequency in spring (b) and mean relative occurrence frequency for spring (c) on the other side. Labels for the measurement years (Y1–Y8) and the calendar year of the spring (in brackets) are also shown. The solid lines represent linear fits and serve to guide the eye.