

# The Modulation of Synoptic Weather Patterns and Human Activities on the Diurnal Cycle of Summertime Canopy Urban Heat Island in Yangtze River Delta Urban Agglomeration, China

Tao Shi<sup>1</sup>, Yuanjian Yang<sup>2,\*</sup>, Lian Zong<sup>2</sup>, Min Guo<sup>2</sup>, Ping Qi<sup>1</sup>, Simone Lolli<sup>3</sup>

<sup>1</sup>School of Mathematics and Computer Science, Tongling University, Tongling, 244000, China

<sup>2</sup>School of Atmospheric Physics, Nanjing University of Information Science and Technology, Nanjing, 210044, China

<sup>3</sup>CNR-IMAA, Contrada S. Loja, 85050 Tito Scalo (PZ), Italy

Correspondence to: Prof. Yuanjian Yang (yyj1985@nuist.edu.cn)

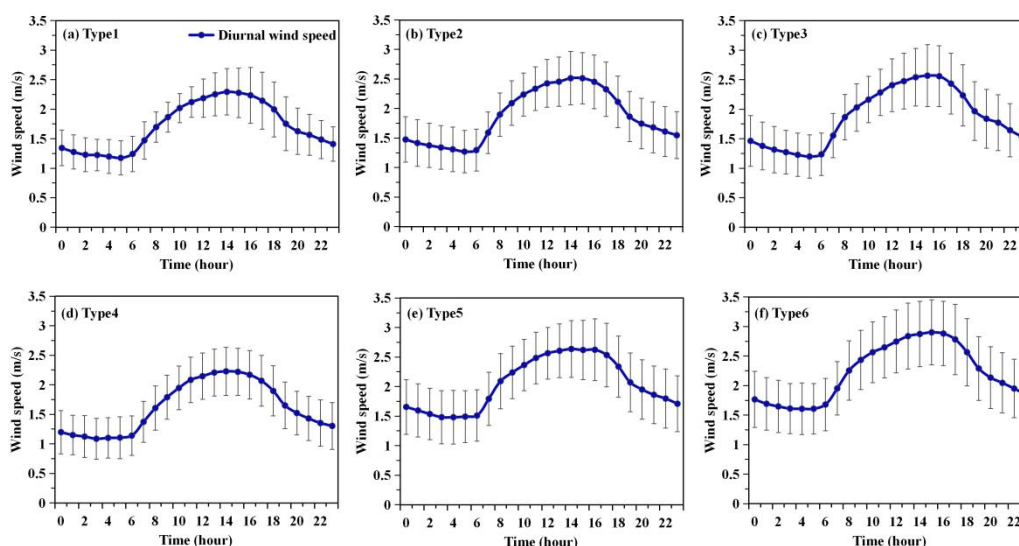
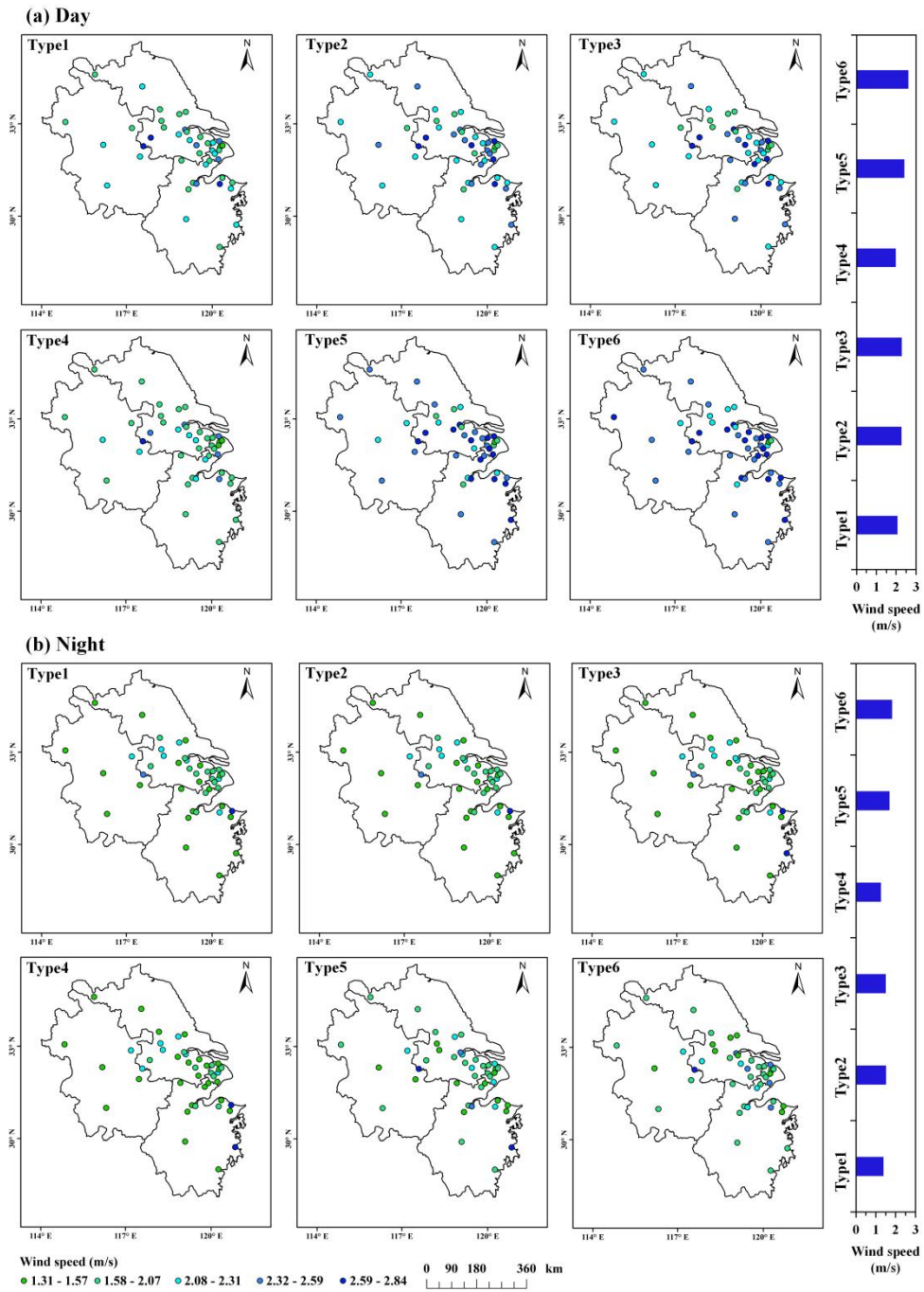


Figure S1: Diurnal variations of WS in YRDUA under different SWPs (a-f).



**Figure S2: Spatial patterns of WS in YRDUA during the day (a) and night (b) under different SWPs. The bar chart on the right represents the average WS under different SWPs.**

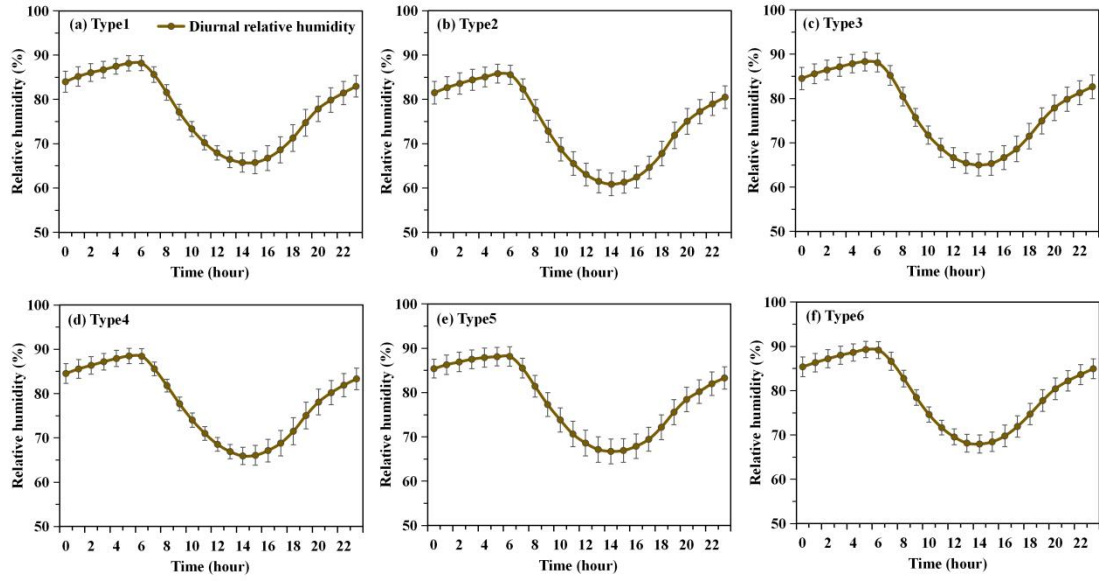
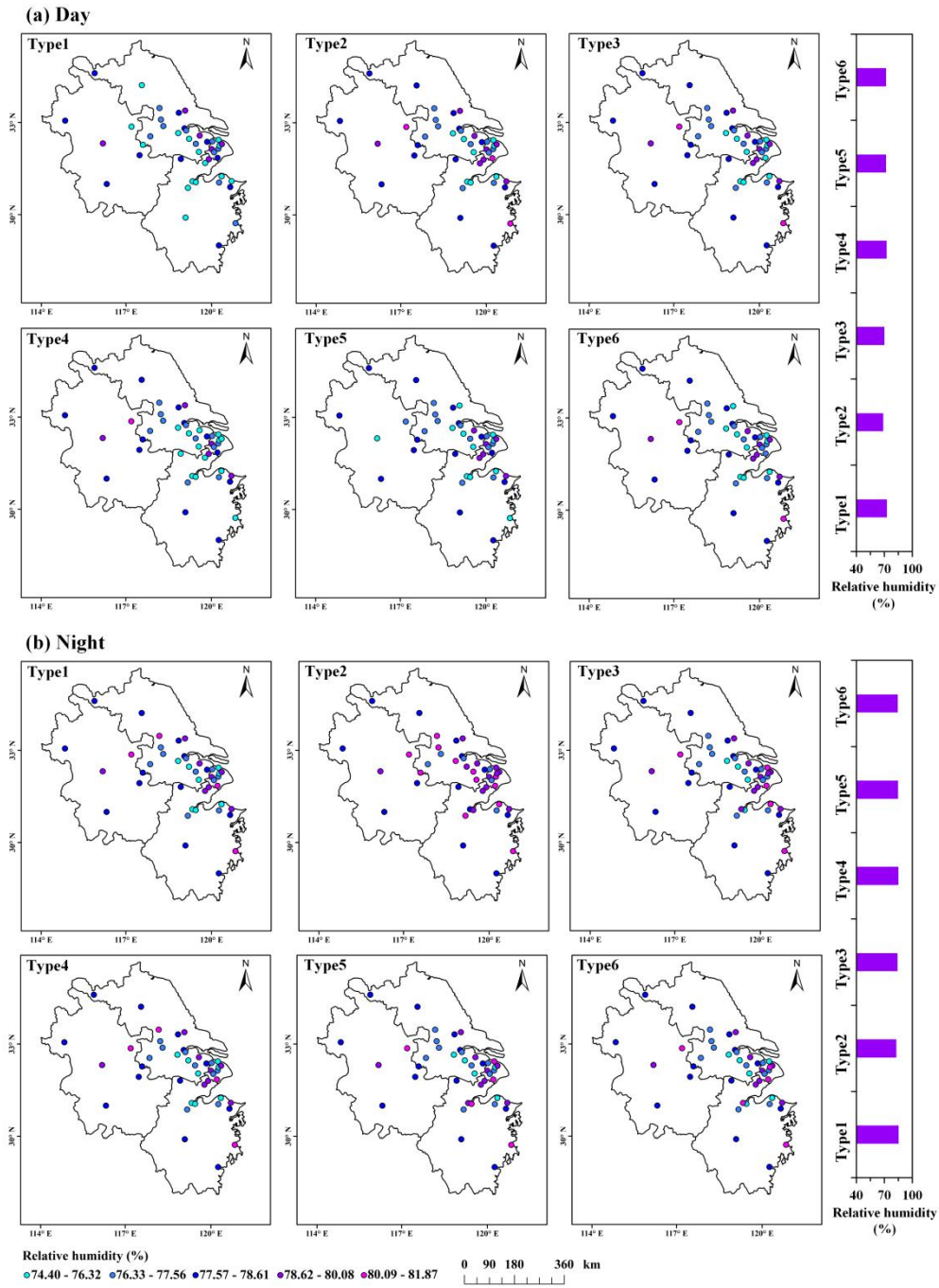


Figure S3: Diurnal variations of RH in YRDU under different SWPs (a-f).



**Figure S4: Spatial patterns of RH in YRDUA during the day (a) and night (b) under different SWPs. The bar chart on the right represents the average RH under different SWPs.**

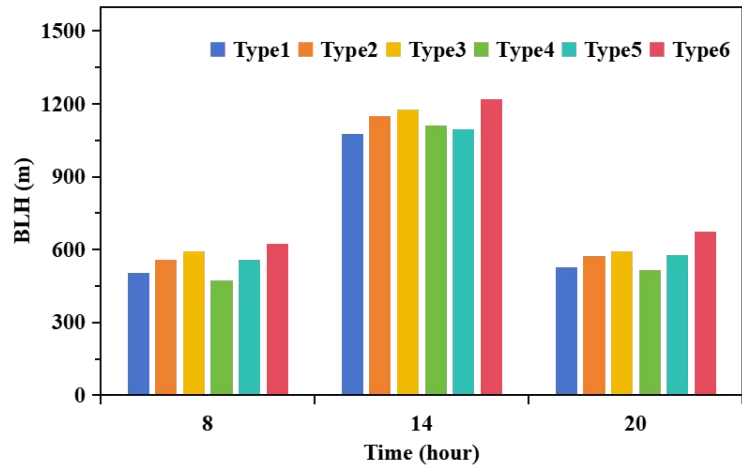


Figure S5: Diurnal variations of BLH in YRDUA under different SWPs.