

Supplemental Material

Intraseasonal variation and future projection of atmospheric diffusion conditions conducive to extreme haze formation over eastern China

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Supplementary Table S1 and Figures S1–S3

Table S1. The frequency of haze events (times per 10 winters) between 2006–15 and 2090–99 in three scenarios: 7 simulations of RCP8.5; 14 simulations of RCP8.5_fixedaerosol; and 14 simulations of RCP8.5_fixedGHG.

	RCP8.5	RCP8.5_fixedaerosol	RCP8.5_fixedGHG
2006–15	54.3	53.9	55.1
2090–99	60.1	55.5	57.7

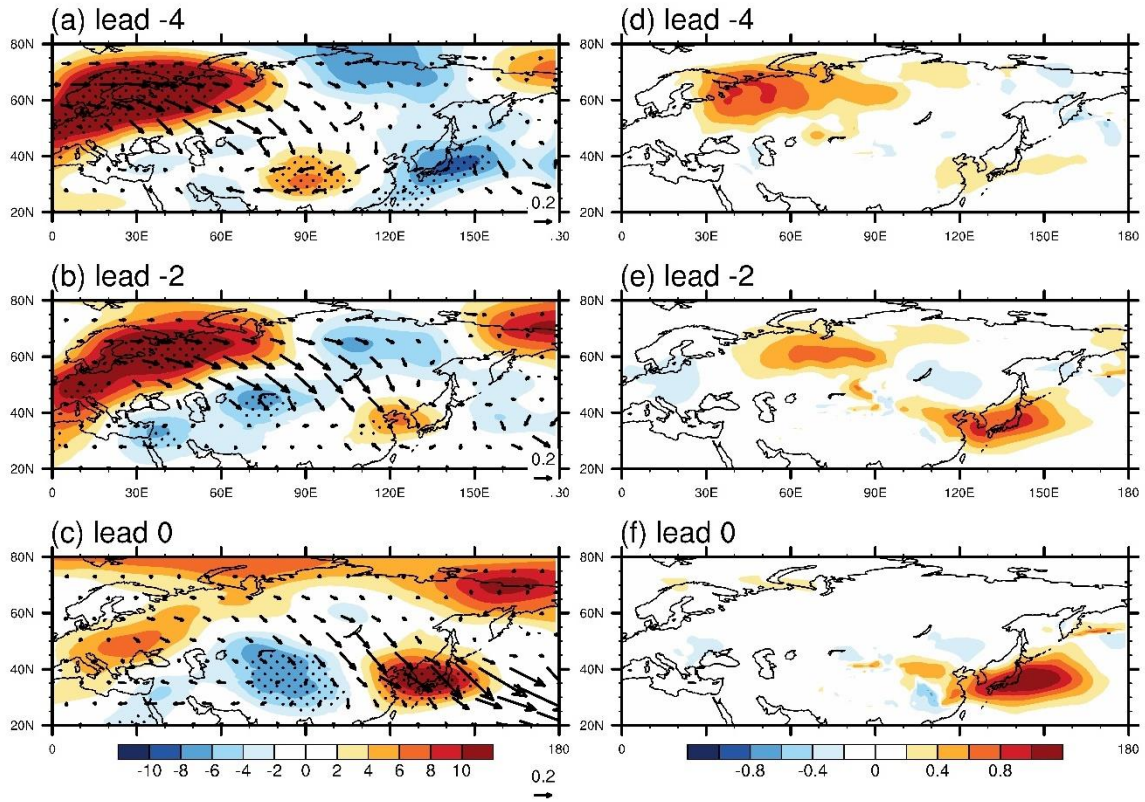


Figure S1. Changes of 200-hPa horizontal wave activity flux (WAF) overlaid on the 500-hPa geopotential height anomaly at a lead of (a) -4, (b) -2, and (c) 0 days of haze events between 2006–15 and 2090–99 under the RCP8.5 scenario. (d–f) As in (a–c) but for 850-hPa vertical WAF. Dotted areas denote where the change is statistically significant at the 0.05 level.

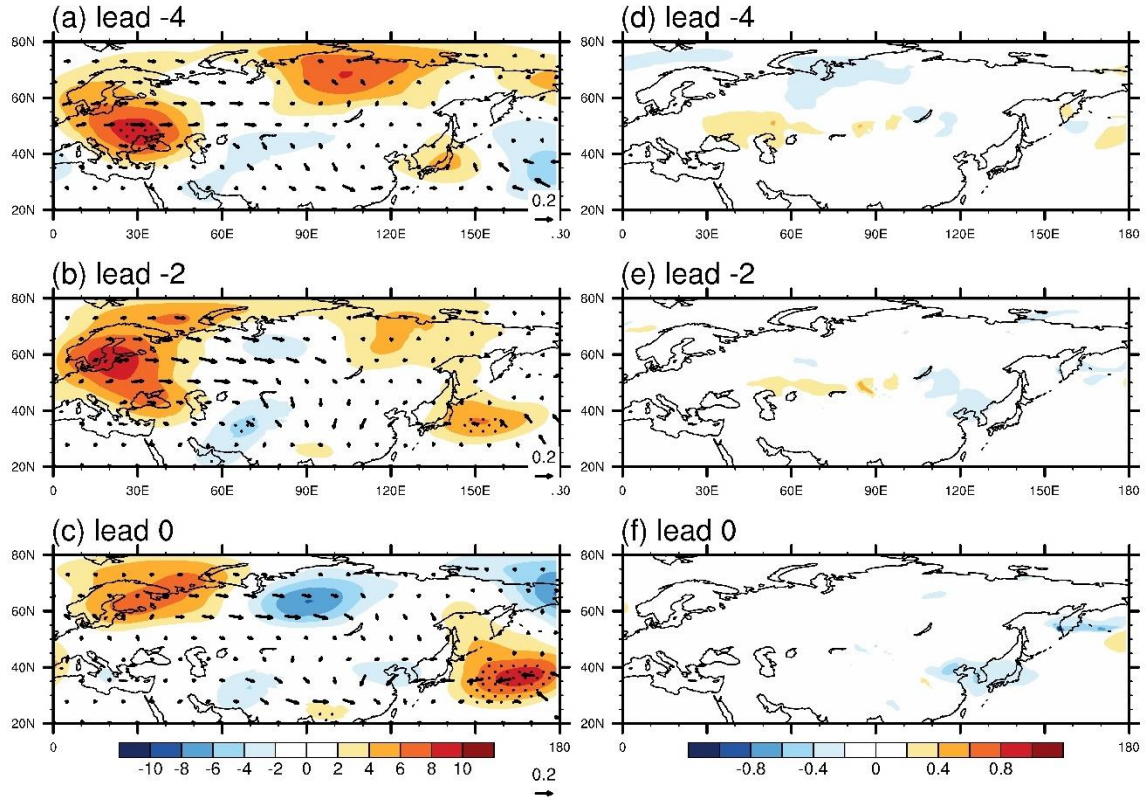


Figure S2. Changes of 200-hPa horizontal wave activity flux (WAF) overlaid on the 500-hPa geopotential height anomaly at a lead of (a) -4, (b) -2, and (c) 0 days of haze events between 2006–15 and 2090–99 under RCP8.5_fixedaerosol. (d–f) As in (a–c) but for 850-hPa vertical WAF. Dotted areas denote where the change is statistically significant at the 0.05 level.

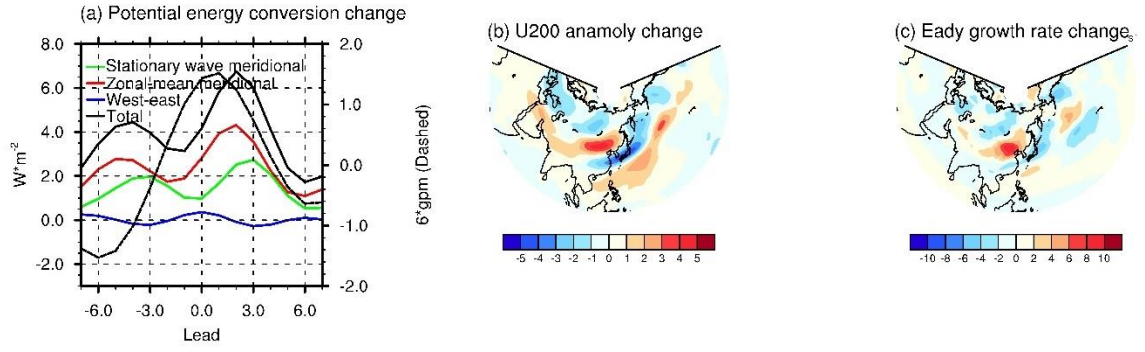


Figure S3. Change of composite haze events between 2006–15 and 2090–99 under RCP8.5:

(a) temporal variation of the 500-hPa potential energy conversion term in the East China Sea (30 °–45 °N, 120 °–150 °E); (b) composite anomalies of 200-hPa zonal wind (shading) at a lead of –1 day of haze events; (c) composite maximum Eady rate (shading) at a lead of –1 day of haze events.