Supporting information

Surface wind observations affected by agricultural development over Northwest China

Songjun Han$^{1,3}$ Qiuhong Tang$^2$ Xuezhen Zhang$^2$ Di Xu$^{1,3}$ Lihang Kou$^4$

1. State Key Laboratory of Simulation and Regulation of Water Cycle in River Basin, China Institute of Water Resources and Hydropower Research, Beijing 100038, China
2. Key Laboratory of Water Cycle and Related Land Surface Processes, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China
3. Department of Hydropower and New Energy Development, China Guodian Corporation, Beijing, 100034, China
4. National Center of Efficient Irrigation Engineering and Technology Research, Beijing 100048, China

Contents of this file
Table S1 and Figures S1 to S2

Introduction

This supporting information provides the detailed information on the NDVI and rawinsonde wind data used in the main article.
Table S1. General characteristic of rawinsonde sites

| Region    | Station code | CF | Longitude | Altitude | Label |
|-----------|--------------|----|-----------|----------|-------|
| Northwest China | 51243        | 0  | 45.62     | 84.85    | y     |
|           | 51463        | 0  | 43.78     | 87.65    | y     |
|           | 52323        | 0  | 41.80     | 97.03    | n     |
|           | 52495        | 0.03 | 40.17     | 104.80   | y     |
|           | 52267        | 0.06 | 41.95     | 101.07   | y     |
|           | 51288        | 0.08 | 45.37     | 90.53    | n     |
|           | 52418        | 0.51 | 40.15     | 94.68    | y     |
|           | 51828        | 0.52 | 37.13     | 79.93    | n     |
|           | 51133        | 0.53 | 46.73     | 83.00    | y     |
|           | 52533        | 0.55 | 39.77     | 98.48    | n     |
|           | 51628        | 0.55 | 41.17     | 80.23    | y     |
|           | 51656        | 0.58 | 41.75     | 86.13    | y     |
|           | 52652        | 0.60 | 38.93     | 100.43   | n     |
|           | 52866        | 0.65 | 36.72     | 101.75   | n     |
|           | 51709        | 0.66 | 39.47     | 75.98    | y     |
|           | 51644        | 0.69 | 41.72     | 82.97    | y     |
|           | 51431        | 0.72 | 43.95     | 81.33    | y     |
|           | 52681        | 0.79 | 38.63     | 103.08   | n     |
|           | 51076        | 0.86 | 47.73     | 88.08    | y     |
|           | 56080        | 0.44 | 35.00     | 102.90   | n     |
|           | 56247        | 0.08 | 30.00     | 99.10    | n     |

* All the stations listed are included when evaluating the upper-air wind speed at pressure levels of 700 hpa, the stations with label "y" are included when evaluating the upper-air wind speed at pressure levels of 850 hpa
Fig. S2 (a) Time series of growing season upper-air wind speed at the pressure level of 850 hpa from 1980 to 2007; (b) plots of growing season surface wind speed against corresponding upper-air wind speed.
Fig. S2 (a) Time series of growing season NDVI from 1982 to 2007 of the station groups with C<0.1 and C>0.5; (b) plots of growing season surface wind speed against corresponding NDVI.