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[Abstract Title]

Relationship between visibility and wind speed in Beijing Tianjin Hebei region of China

[Abstract]

From 1981 to 2015, the wind speed in Beijing-Tianjin-Hebei region decreased significantly under the background of global warming. With the large-scale reduction of high wind speed areas, the number of low visibility days is increasing. We reveal the characteristics of the relationship between visibility and wind speed in the area. There exists a significant logarithmic relationship between the visibility and wind speed at the intra-region most stations. The greater the wind speed, the greater the visibility. However, even if the wind speed increases in some areas, the improvement of visibility in some areas is still minimal. We call these the "bad-blowing area" that are mainly distributed in the following areas: Beijing Yanqing Changping—Tianjin Wuqing Beichen—Tangshan line; Eastern Baoding—Cangzhou; Shijiazhuang—Middle Xingtai—Central and Western Handan. High speed industrialization is one of the main reasons for the formation of a "bad-blowing area", especially industrial pollutants, of which impact results showing had a certain time lag. In the context of



reduced wind speeds, it will take longer to improve the atmosphere in these areas. At the same time, for the current "good-blowing area", we should also strengthen governance and supervision to avoid it becoming a "bad-blowing area".

[Keywords]

Beijing-Tianjin-Hebei region; visibility; wind speed; industrialization