- A comprehensive analysis of major regions in China was included in the revision but kept in the supplement. These results should be promoted to the main manuscript (if possible in an abridged table or bar chart form) as the applicability of whole-China averages based on the model data was one of the major concerns in the previous review round.

Response: Thank you for the comment. Tables S8-S10 showing the evaluation results of meteorological variables have been replaced by Table 4 in the main manuscript. Tables S18-S23 showing the evaluation results of air pollutants have been replaced by Table 6 in the main manuscript.

- It is interesting that the two-way coupling neither improves (as one might hope for) nor worsens (as seemed to be the major concern by the authors) the model performance (L325-330). This somewhat contradicts the purpose of the manuscript (which is to point out the effects of two-way coupling on surface climate and air pollution estimates in China). Maybe some elaboration on the benefits / downsides of two-way coupling is needed in the introduction?

Response: Thank you for the comment. As pointed out in the main manuscript, the main purpose of this study is to investigate how O_3 affects meteorology and air quality through O_3-vegetation interactions and the feedbacks of O_3-vegetation coupling on O_3 concentration itself in China, which has not been examined before. For the model performance, we did not hope that the implemented model will help improve the model performance a lot at this stage considering the uncertainties that we mentioned in the discussion. We mainly intended to show that the implemented model used in this study can capture the O_3-vegetation interactions without the expense of worsening the model performance. With the consideration of soil moisture deficit, the detailed vegetation type classification, the more appropriate O_3 damage thresholds, we reasonably hope that model performance can be improved in the future, as mentioned in the discussion.

In this study, the land surface processes, atmospheric dynamics, and atmospheric chemistry in the WRF-Chem model were fully coupled. The two-way coupled model allows the O_3 concentration simulated by the chemical model to be dynamically passed onto the land surface model at every time step to modify the land surface processes due to O_3 damage, and the land surface variables simulated by land surface model to be dynamically passed back onto the atmospheric components, thus allowing immediate, two-way feedback effects onto meteorological fields, O_3 and other atmospheric chemical constituents, which is the major benefit of the two-way coupling (Section 2.2, L206-L212) in both terms of representing the real-world interactions more realistically and allowing coevolution of vegetation-atmosphere in future predictions.

Previous studies using offline (L94-L99) and two-way coupled models (L101-L116) have been introduced in the introduction section and in Table S15. The comparison between our results with those from offline models are now also discussed in L374-L386, L535-541.The downsides of the two-way coupled model of this study are now discussed in L544-L572.