

Response to Reviewer 1 Comments

Dear Reviewer#1

Thanks for the affirmation of my paper in your review. Your careful review has benefited me a lot and made me realize that more detailed and rigorous research is needed in the future.

In the following part, I will reply to the questions you have pointed out to me in the paper one by one.

Point 1: The authors are informed to add more details regarding their original contributions in this present work.

Response 1: Thank you for your suggestions. I made a few additions in the introduction. In this paper, there are two major contributions. Firstly multi-stage and multi-angle improvement and optimization of multi-variable grey model are carried out, including background value optimization, fractional optimization, linear increment optimization and so on. Secondly, the literature in the ScienceDirect database for the last ten years is reviewed, and the carbon emission impact factors of civil aviation are selected by correlation analysis and research frequency statistics. The calculated carbon emission values are taken as sample data based on Method 2 of Civil Aviation in Volume 2 of the 2006 IPCC Guide to National Greenhouse Gas Inventories.

Point 2: Please pay attention to the correct usage of all punctuation marks in the text.

Response 2: Thank you very much for your careful review. I have checked the whole paper again and made corrections. I will also keep a careful and serious attitude in my future research work. Thank you again.

Point 3: In the conclusions section. Please make sure to suggest some possible specific future works based on the obtained results in this work such as generalizations or extensions or any valuable suggestions in one to two sentences only, so readers and other interested researchers can prepare a future plan for further research works concerning this particular study.

Response 3: I have made the following explanation in the conclusion of the paper. Thank you for your good advice.

Although the paper has carried out multi-angle and multi-level optimization of the model, such as background value, fractional order, linear increase, etc., and the model still has room for improvement, such as from the perspectives of initial value improvement, residual correction and metabolism to do further research.

Point 4: At the end of all equations must be putted "COMMA" or "POINT" according to the typing rules. Therefore, they need to pre-check all the paper.

Response 4: Thank you very much for your careful review, which has benefited me a lot and made me realize that more detailed and rigorous research is needed in the future. I have made the correction

Point 5: For better presentation, I suggest authors add a frame for all the graphical and

numerical results.

Response 5: Thank you very much for your good advice, and I have added a frame for all the graphical.

Thank you again.

Yours
Cheng Li