

Comments by Owen R. Cooper (TOAR Scientific Coordinator of the Community Special Issue) on:

Developing the DO3SE-crop model for Xiaoji, China

Pritha Pande, Sam Bland, Nathan Booth, Jo Cook, Zhaozhong Feng, and Lisa Emberson

EGUsphere [preprint], <https://doi.org/10.5194/egusphere-2024-694>, 2024

Discussion started: 16 April 2024; Discussion closes 5 June, 2024

This review is by Owen Cooper, TOAR Scientific Coordinator of the TOAR-II Community Special Issue. I, or a member of the TOAR-II Steering Committee, will post comments on all papers submitted to the TOAR-II Community Special Issue, which is an inter-journal special issue accommodating submissions to six Copernicus journals: ACP (lead journal), AMT, GMD, ESSD, ASCMO and BG. The primary purpose of these reviews is to identify any discrepancies across the TOAR-II submissions, and to allow the author teams time to address the discrepancies. Additional comments may be included with the reviews. While O. Cooper and members of the TOAR-II Steering Committee may post open comments on papers submitted to the TOAR-II Community Special Issue, they are not involved with the decision to accept or reject a paper for publication, which is entirely handled by the journal's editorial team.

General Comments:

TOAR-II has produced two guidance documents to help authors develop their manuscripts so that results can be consistently compared across the wide range of studies that will be written for the TOAR-II Community Special Issue. Both guidance documents can be found on the TOAR-II webpage:

<https://igacproject.org/activities/TOAR/TOAR-II>

The TOAR-II Community Special Issue Guidelines: In the spirit of collaboration and to allow TOAR-II findings to be directly comparable across publications, the TOAR-II Steering Committee has issued this set of guidelines regarding style, units, plotting scales, regional and tropospheric column comparisons, tropopause definitions and best statistical practices.

Guidance note on best statistical practices for TOAR analyses: The aim of this guidance note is to provide recommendations on best statistical practices and to ensure consistent communication of statistical analysis and associated uncertainty across TOAR publications. The scope includes approaches for reporting trends, a discussion of strengths and weaknesses of commonly used techniques, and calibrated language for the communication of uncertainty. Table 3 of the TOAR-II statistical guidelines provides calibrated language for describing trends and uncertainty, similar to the approach of IPCC, which allows trends to be discussed without having to use the problematic expression, “statistically significant”.

Specific Comments:

This paper focuses on the development of the DO3SE-crop model for Xiaoji, China. The topic is appropriate for the TOAR-II Community Special Issue and I did not find any discrepancies between this paper and the other papers that were published during the first phase of TOAR (2014-2020), or with papers submitted so far to the Community Special Issue. I only have two very minor comments, as follows:

Line 34

When citing IPCC it would be best to cite the most recent update from 2021.

Lin 55

When discussing the differences between exposure metrics (e.g. AOT40) and the stomatal ozone flux method, a useful reference is Ronan et al., 2020.

References:

Ronan, A. C., Jason A. Ducker, Jordan L. Schnell, Christopher D. Holmes; Have improvements in ozone air quality reduced ozone uptake into plants? *Elementa: Science of the Anthropocene* 1 January 2020; 8 2. doi: <https://doi.org/10.1525/elementa.399>