

Interactive comment on “Matching soil grid unit resolutions with polygon unit scales for DNDC modelling of regional SOC pool” by H. D. Zhang et al.

H. Zhang

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Dear T. Kato,

We are pleased to receive the message from you, thanks for your contribution to our manuscript. As Referee 1 suggested, we will take advantage of Elsevier Author Services to handle the language editing after we finish major revision, and make sure our manuscript in the 2nd version is free of grammatical, spelling, and other common errors.

We have given Referee 2 reply to his review comments. As Referee 2 suggested, we will revised the manuscript thoroughly. Many constructive suggestions from Referee 2

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for the revision will improve the manuscript not only in presentation but also in scientific quality enough. We are appreciated for his contribution to the manuscript, too.

Yes, you are right. The manuscript created a kind of empirical calibration to fill the gap from soil property dataset conversion from vector to raster format. In fact, there is a classical calculation (default grid size calculation) from traditional soil mapping for the gap. But the classical calculation is concerned seldom in the dataset conversion, results in lot of different problems, e.g. geo-data accuracy, reliability and uncertainty of research. Even if the classical calculation is concerned and adopted in the dataset conversion, such problems still exist and is found, for instance, problems of soil dataset conversion described in the manuscript. The new empirical calibration is very important, useful and effective to solve these problems. Although the calibration is empirical, it is practicability. The practicability will enhance its availability to be applied for other regions in China at least, as discussion in the manuscript. In international society of geo-science, the new empirical calibration will raise an alarm to pay great attention to the key issue, due to the strong effects of soil raster data resolution on result's reliability and uncertainty of research.

Both Referees gave similar comments to the manuscript: The methodology described in the paper is interesting and kind of unique; the manuscript will be of interest to readers of this journal, and should benefit a wide range of readers. We believe after major revision the manuscript will have the high-enough level for publication not only in presentation but also in scientific quality.

We will resubmit this paper after major revisions. We hope the 3rd referee give us more constructive suggestions to improve the manuscript. We always believe high quality paper come from revising not writing. We also hope editor believe and help us. GMD is a top journal with the highest quality in the world. It is our honor to publish paper through the journal. If you have any other comments for the manuscript, please tell us freely, we will do our best to do it. Finally, we also have two questions: 1. Does the resubmit have dead line? 2. Do we need to pay Article Processing Charges for the

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2nd submission? Thanks for your answer.

We are appreciated for your contribution to the manuscript publication in GMD.

Best regards,

Dongsheng Yu

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Interactive comment on Geosci. Model Dev. Discuss., 8, 2653, 2015.