

## ***Interactive comment on “Variations in water storage in China over recent decade from GRACE Observations and GLDAS” by X. Mo et al.***

### **Anonymous Referee #2**

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Overall this is a fairly dense but reasonably well written paper examining variations in Chinese water storage (and subdivisions of China), from 2003 to 2013. The paper is fairly dense in acronyms, equations, variable and writing style, which does not make it is the easiest paper to read. Some conclusions feel that they are overstated, and precision is excess in places for the techniques being used, with little use of error bars (on the final values derived). In addition, the paper does little to motivate 'why' the methods and discussion are strongly relevant to 'natural hazards', and insteads just alludes to them. The paper, after major revision, will be a suitable addition to the literature

Specific comments, in no order of importance: \* Reevaluate precision and number of significant figures throughout. Are these really realistic, and being applied in the C1557

same manner throughout? \* Please provide some measure of uncertainty (and explain what that uncertainty is) to the values given. \* Bring in more of a context of why this pertains to natural hazards, in the introduction, and then various places throughout the manuscript. \* [MINOR] There are MANY acronyms and variables. Please provide either one or two tables with these listed, what they mean, call them Table 1 (or Tables 1 and 2), introducing them early on, and renumbering all the other Tables. \* Ensure that what you are doing statistical is clear to the reader. So for example, "Correlation coefficients" in Table 2, it is not stated what kind of correlation coefficients these are in the table caption or in the text, nor if it is  $r$  or  $r^2$ , nor how one might determine the statistical significance of these. Please go through the entire paper, and ensure that any statistical analyses done are clear 'what' the error/correlation/uncertainty is, how it was determined, so that another reader can reproduce it. In some place statistics are clear—but dense—it is hard to read, as it is almost short hand. In other places, it is not always clear what was done, number of values used, etc., to arrive at the values given. \* Please ensure that you do not state 'more' in terms of conclusions than what the data are telling you. \* [MINOR] Please ensure that for all figures, the TEXT is big enough to read. Some of it is very small. \* Figure 3. If using colour, please indicate the legend. \* Where appropriate, add y-axis labels where there are none now (along with units). \* Figure 7 and 8. Add units to the legend (text above or to right or below). For the divisions, it is better to do "-1.0 to -0.8" rather than "-1 - -0.8" [note precision, and getting rid of - for 'to'] \* spring and other seasons. You never state what months these cover.

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