

Responses to Ali

- 01** All contents related to LPJ-DGVM has been deleted because we might have not completely understood LPJ-DGVM on this stage.
- 02**) Cross-validation has been discussed (lines 766 – 769 on page 10).
- 1) and 2)** The section 1 and section 2 have been combined into one section of introduction and be shortened to less than 900 words.
- 3)** The “Experimental design” section has been divided into two sections, data and materials section and methods section.
- 4)** The text from line#21 to line#26 on page 19551 has been moved to the data and materials section.
- 5)** The biomass carbon stock and biomass carbon density have respectively been abbreviated to BCS and BCD instead of CS/MACS/AMCS and CD/MACD/AMCD.
- 6)** In the discussion section, line 19 through line 24 on page 19554 has been deleted.
- 7)** All of the equations in results section have been discussed (lines 892-905 of page 15).
- 8)** It has been discussed that how the mean annual carbon stocks varied in space across various methods (lines 906 -912 on page 15).
- 9)** Other factors has been little discussed (lines 993 – 996 of page 19)

Responses to Fischer

- 0)** The section 1 and section 2 have been combined into one section of introduction

and be shortened to less than 900 words.

1) Explanation of the used methods

(1) LPJ setting up: All contents related to LPJ-DGVM has been deleted because we might have not completely understood LPJ-DGVM on this stage.

(2) HASM-SOA: The method for data fusion, HASM-SOA, has been explained in details (see supplement 1).

2) Scatter diagrams and comparison with other results

(1) The scatter diagrams of simulated BCD against observed BCD have been added.

(2) Comparison with other results has been added.

3) The section 1 and section 2 have been combined into one section of introduction and be shortened to less than 900 words.

4) The title has been changed to “Analyzing the uncertainty of estimating forest carbon stocks in China”

5) We agree.

6) Table 2 and table 3 are to be deleted.

7) The references of the data of Table 1 have been added (lines 1166 - 1171).

8) It has been added how the forest distribution data have been created (line 663 – 670 on pages 5 and 6).

8) BEF is the abbreviation of biomass expansion factor (lines 625 – 626 on page 4).

9) The biomass carbon stock and biomass carbon density are respectively abbreviated to BCS and BCD instead of CS/MACS/AMCS and CD/MACD/AMCD.

10) Fig03 (originally Figure 2) has been improved as follows by adding histograms of

carbon values for the different methods as a first rough comparison.

- 11)** Results related to LPJ have been deleted.
- 12)** “mean annual carbon stocks” is a mistake. It means BCS.
- 13)** We agree.
- 14)** The biomass carbon stock and biomass carbon density are respectively abbreviated to BCS and BCD instead of CS/MACS/AMCS and CD/MACD/AMCD.
- 15)** The Table 1 has no change, but labelled as Table 5. Table 2 and table 3 are deleted. Table 4 and table 5 are combined and the new table is labelled as Table 1. The original Table 6 renumbered as Table 2. The original Table 7 is renumbered as table 3; The original Table 8 and table 9 are combined and the new table is numbered as Table 4.
- 16)** The increment maps of biomass carbon stocks from comparing two adjacent periods have been added.