

Biogeosciences Discuss., referee comment RC1
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Comment on bg-2022-18

Anonymous Referee #1

Referee comment on "Updated estimation of forest biomass carbon pools in China, 1977–2018" by Chen Yang et al., Biogeosciences Discuss.,
<https://doi.org/10.5194/bg-2022-18-RC1>, 2022

In response to the achievement of carbon neutrality target in China, Yang et al. estimated the forest biomass C storage and its changes over the past four decades and especially updated in the most recent decade. The scientific question was quite straightforward, the methods were well established, and the conclusions were reliable and robust. Although the MS is well written, there remain a few minor issues to address (see short list below). but I think these should be straightforward.

General comment:

One of my concerns is that the estimate of forest C stocks and C uptake capacity should not only focus on plant biomass but also consider soil C sequestration. Additionally, compared with other biomass estimation studies, what are the advantages and innovations of this study?

Specific comments:

From your method, you should have calculated the biomass of each province, can you add the biomass results of each province in the attached table?

Line 19: Density can be taken several ways, best to define this term. It is the average stock per area? May be C storage per unit area.

Lines 21–24: The data you given here needs to be confirmed.

Line 27: China's

Line 28: Ecological

Lines 46–48: It just is not been studied much.

Lines 107–109: Specific tables or figures should be added to show where this part of the results came from.

Table 2: Please add the averages for 1977–2008 and 2009–2018 in the format of Table 1. And please add the corresponding content to the result section.

Line 142: "The average C sink for the previous 30years was calculated by ..." Please add a space between 30 and years.

Lines 154–158: Similar with Lines 107–109.

Lines 167–172: Why did Fang et al. adopt a linear relationship that makes the C sink for 1997–2003 lower than the result in this paper.