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# *Interactive comment on* "Changes in soil carbon sequestration in *Pinus massoniana forests* along an urban-to-rural gradient of southern China" *by* H. Chen et al.

**Anonymous Referee #2**

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This is a solid study with potentially important findings regarding the influence of urbanization on soil C in one region of China. The potential significance is enhanced by the fact that this seems to be the first study of its kind in a developing country with a warm, humid environment. This region is likely more representative of areas that will see rapid urbanization in the future than previous studies.

General Questions

Do they know the age of forests and were they established prior to urbanization or after urbanization? Is that consistent across the study sites? Could that be a factor in the difference in fine roots?



Several times the authors refer to "urbanization induced environmental changes" but this is not defined. Some examples of specific changes they consider relevant to this ecosystem should be given.

Specific Comments

P11321, line 3, rather than referring to "belief", phrase these as what the current scientific evidence is supporting

Section 3.2 In the discussion of soil C at different depths the results are described as significant for the 0-10cm and for the 0-40 cm, but not the second and third layers. This makes it appear as though all the change is in the 0-10 cm, but Figure 2 shows differences in all the layers. So, is there greater significance in the trend when the whole column is considered than just the top 10 cm? Or is the majority of change driven by the top layer?

P11328 line 15 The discussion refers to the elevated soil temperatures associated with urban sites, yet soil temperature is not mentioned in the methods. Was this measured, and was higher soil T associated with urbanization in this study? Or is this statement relying on other sources of information?

Interactive comment on Biogeosciences Discuss., 10, 11319, 2013.