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Interactive comment on “Use of phytoremediation and biochar to remediate heavy metal polluted soils: a review” by J. Paz-Ferreiro et al.

Anonymous Referee #2

Received and published: 16 December 2013

This is very interesting review, which summarize the phytoremediation and biochar application to remediate metal polluted soils. This review is well written, nevertheless there are some sections, which should be enriched/corrected. For this review only minor revision is required. Specific comments are follows: (1)Chapter 2: add some papers (references) about phytostabilization methods; (2)Page 2158, lines 28 – 29: Is the metal concentration always higher in the shoots compared to the roots. I think, that it depends on the kind of metal (e.g. Cd x Pb) especially on the kind of plant; (3)Page 2162, page 6: this is only recommendation to add the sentence, which should be like “introduction” for the following chapter 3 focused on the biochar; (4)I suggest to create the chapter focused on factors, which can affect metal sorption efficiency of biochar + add the table for this chapter; (5)Next, I suggest to use the chapter about mechanisms during metal sorption before the chapter about studies focused on the

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effect of biochar on soil metals; (6) About the chapter focused on the biochar effect on the metals behaviour in the soil: (6a) Page 2162, line 24: you mentioned that the table 2 is brief summary, however, more than 100 studies I found (on the WOS, from 2007 to 2013), which are focused on the biochar sorption of metals from the soil. So, in your case only the term chosen studies are relevant. Additionally, this chapter should be discussed in more detail using other (especially the most recent) papers; (6b) Page 2162, lines 4 – 14: I suggest to put the subchapter about earthworms on the end of this chapter; (6c) Page 2163, lines 6 – 11, lines 18 – 19, and lines 22 – 28: I recommended to put these sentences into the chapter about combining biochar and phytoremediation; (7) In the chapter 6 (Combining biochar and phytoremediation) take into account the phytotoxicity test as well; (8) Page 2170, lines 1 – 3: You should mention here the long term experiments approach as well...

Interactive comment on Solid Earth Discuss., 5, 2155, 2013.

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