Solid Earth
Discussions

Open Access

EGU

SED

Interactive
comment

Interactive comment on "Simulating Carbon Sequestration using Cellular Automata and land use assessment; Case of: Karaj City, Iran" *by* Ali Khatibi et al.

Ali Khatibi et al.

sh_pourebrahim@ut.ac.ir

Received and published: 30 June 2017

First of all, we would like to thanks for very great comments of reviewer (1) to help us improve the manuscript and to inform you that the revised version of our manuscript with considering all comments of reviewer (1) has been prepared and it is ready for submission to your journal. Based on comments, the outline of corrections is as follows: You should improve the abstract, see line 18 and 19 you can rephrase these lines. The abstract revised based on your comment. It starts out with one line introduction, the study objective, the methodology, main finding and conclusion. Line 18 and 19 revised. These changes have been highlighted in the text.

Printer-friendly version

Discussion paper

The introduction is good but you can present more references in it. Some references has been added to this part and highlighted in the text

In the part of material and method, you should present a map that contains a location of your study area and samples point. About half page has been added to the methodology to explain study area and the reason of choosing this location. It is followed by the Figure 1 to show the location of Karaj city in Iran.

For me it not clears enough why you used two methods for measuring the organic carbon (Loss On C1 Ignition and WB), and by which method you presented the final calculation of carbon stock, or you want to compare between methods so it should be presented in the results and discussion. Two methods for measuring sequestrated carbon that we used in the study are different base on type of samples. For plant samples, it was used plant dry weight method and for soil samples we used Walleky and Black method. Finally the mean values obtained by each method used to calculate for each land use-cover class. This explanation has been added into the second paragraph of methodology and has been highlighted in the text.

You told us that you used geographical and remote sensing programs such as ArGIS, Envi and IDRISI (what versions) , and you did not illustrate any maps for land use or land cover changes under the studied periods (past, present and future) . Figure 3-7 has been added to show the land use/cover changes.

Results part contains interested result but it should improve so much and it should enclose a concentrated discussion. Discussion (one page) has been added at the end of the results.

Last of all, the initial paragraph of conclusion it should not be there, and the conclusion should be focused, and some part of it can go to the part of results and discussions. Based on your great comments, conclusion has been revised and rephrased. The changes has been highlighted in the text.

Sincerely, The Authors

Please also note the supplement to this comment:
https://www.solid-earth-discuss.net/se-2017-20/se-2017-20-AC1-supplement.pdf

───────────────────────────────

Interactive comment on Solid Earth Discuss., https://doi.org/10.5194/se-2017-20, 2017.

Printer-friendly version

Discussion paper