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Date: 17 June 2002To: Dr. Ruth YanaiEnvironmental Science and Forestry - SUNYFax: (315) 470-6934From: Monica G. TurnerCo-Editor-in-ChiefTotal number of pages (including this cover sheet): 5

Comments:

MS# 020152

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June 17, 2002

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RE: SOIL CARBON DYNAMICS FOLLOWING FOREST HARVEST: AN ECOSYSTEM PARADIGM
RECONSIDERED (MS# 020152)

Dear Dr. Yanai:

The reviewers have completed their evaluation of your paper and Dr. Gaius Shaver, the subject-matter editor, has recommended that very minor revision will be required before the paper can be accepted for publication. I have reviewed the recommendation and agree with the decision. A revision that addresses the substantive concerns of the reviewers will be re-evaluated by me.

I have enclosed the comments from the reviewers and the subject-matter editor. Please consider all the information when preparing your revision. Following usual manuscript submission procedures, you should submit two paper copies and one disk copy (including tables and figures) of the revision to the editorial office for re-evaluation within 6 weeks of receipt of this letter. In addition, please include a cover letter that explains, point-by-point, the changes (and text location) you have made in response to each reviewer comment. Revised materials received more than 3 months from the date of this letter will be regarded as a new manuscript.

Thank you for submitting your work to **ECOSYSTEMS**.

Sincerely,

Monica G. Turner

Monica G. Turner
Co-Editor-in-Chief

C: Dr. Shaver
Reviewers



Springer

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Subject-Matter Editor's Comments: Yanai et al. (Ecosystems MS#020152)

Both reviewers felt that this manuscript is an interesting and timely review of an issue that is of real importance to many of the readers of ECOSYSTEMS. Both felt that the manuscript is reasonably well-written but both had a few minor suggestions, mostly intended to improve what they feel is an already very good paper.

My own reaction is similar, and I have nothing to add to the reviewers' comments. I urge the authors to make quick work of the very minor changes requested by the reviewers, shortening the last sections where possible although major reductions are not needed. There should be very few problems in turning this manuscript around but I would ask the authors to describe briefly the changes they have made in a cover letter accompanying the revised manuscript.

Congratulations, and I hope to see this published soon.



Springer

Reviewer #1

Review of "Soil carbon dynamics following forest harvest: an ecosystem paradigm reconsidered" by Yanai et al.

This is an important paper that must be published. It is not only a review of the forest harvest/soil carbon question, it is an example of how results from one study (especially a study from a well-know site and institution) can be carried way too far, even to global scales. It also illustrates for us once again how speculation can become fossilized into "fact" when uncritically cited and re-cited often enough. This paper should serve as a warning for us all to review the literature very critically.

Specific comments:

p. 2, line 1: My first mark on the ms was that the importance of the Covington study is overstated here and on p. 3. After reading the paper, I retracted that comment and agree with this statement as it is.

p. 5, para 2: Very good point about buried woody debris! We probably do miss this regularly.

p. 7, para 3: It is amazing that the Covington study found its way into global C cycles so early and stayed so long. Very interesting historically, very interesting indeed.

p. 8, para 1: Again, I am amazed at how this house of cards was built. Thank you for showing this to us - it is a cautionary note for global modelers and for scientific methods in general. This kind of critique is sorely needed in many other areas as well.

p. 19, para 1: Amazed again. LINKAGES was also caught up in this and even a fudge factor could not emulate it.

p. 24, para 3: Johnson and Curtis actually found a very mixed bag of responses, some increases some decreases in soil C, but the average overall effects when all studies were considered together was slight. This does not mean, however, that the effects were slight at each and every site.

p. 25, bottom: I think this also reinforces the need for long-term soil sampling studies, even with all the problems with methodology that they entail.

Reviewer #2

JUN 12 2002

Review for Ecosystems Ms: 020152
Soil Carbon Dynamics Following Forest Harvest: An Ecosystem Paradigm
Reconsidered.

This manuscript very elegantly reviews the origin, history, and influence of the Covington curve. It is really quite an interesting story, particularly in how a study that could never quite be replicated, validated, or modeled, could have such influence on our (mis)understanding of the global carbon cycle. Is it new science? No. Do the authors add a lot to our understanding of soil C dynamics following forest harvest? Not really, though they do emphasize the importance of mixing of organic and mineral soil during logging, and how this might explain some of the difficulties in re-creating the Covington curve. Should it be published? Yes, either here or somewhere else, as it is such an excellent review of the issue and a good example of how something so simple can be used and misused. If published here, my only suggestion is to shorten by about 1/4, particularly the Lessons Learned section.