

Associate Editor Decision: Publish subject to minor revisions (Editor review) (04 Apr 2017) by Christopher A. Williams

Comments to the Author:

The revised version satisfactorily addresses all of the reviewer's concerns. AS a final step prior to acceptance I ask that you please make the following minor revisions.

- L257 - 259: Edit "probably influenced by the (average) effect of the natural disturbances occurred during 2000-2012" to clarify what about natural disturbances changed during this interval or relative to the recent past to cause the negative balance for dead wood and litter. Clarify if there were fewer or more natural disturbances during the 2000s relative to prior decades.

We edited and further clarified this point, as suggested (L. 258-264)

- L259-260: This sentence seems to suggest that fire is the dominant pathway by which DOM is released to the atmosphere, rather than heterotrophic respiration. Please correct this. Even if disturbances have killed material and transferred it to DOM, and even if fire has been the dominant disturbance type (has it? - probably not), fires typically lead to less direct emission as combustion and more indirect emission from decomposition of disturbance-killed material (e.g. Ghimire et al. 2012 JGR-B).

We corrected and clarified this point, adding a specific reference to Ghimire et al., as suggested (L. 265-268)

- L264-267: If this negative Delta Soil C value is due to the transfer of C from forest to non-forest rather than release to the atmosphere, Fig 2 displays this incorrectly by omitting carbon transfers to non-forest lands and instead displaying all of it as release to the atmosphere. This must be corrected.

We corrected and clarified this point, as suggested (L. 268-273). As a consequence, also Figure 2 (and Figure 1S) was slightly modified, to highlight the C transfer to non-forest lands.