

Detailed comments

Referee:

Pg 451, L 4

Substitute “there remain important research gaps” with “important research gaps exist”.

Authors:

Ok, we will make the requested change in the revised ms

Referee:

Pg 452, L 3

“Aimed” or “aims”? I think you talk about your own study, so “aims”.

Authors:

Since we have opted for using, whenever possible, the past tense throughout the ms, we prefer to maintain “aimed”

Referee:

Pg 452, L 6

Re-write: “wants to”.

Authors:

Since we have opted for using, whenever possible, the past tense throughout the ms, we prefer to maintain “wanted to”

Referee:

Pg 453, L 8-10

Soil texture determined in the field or by feel method? Did the Authors did the test? I think this statement is not necessary and should be removed?

Authors:

We meant to say that soil texture was determined by the feel method. We prefer not to remove this part of the sentence as the feel method is coarser than the standard laboratory method.

Referee:

Pg 453, L 14-19

This paragraph should be moved to methods.

What is the location of study sites (add exact individual coordinates if possible)?

What is the distance between them?

What is the slope and aspect?

What is the age of the unburnt eucalypt plantation, independently of the period without fires?

Is the study catchment in the burnt area one of the previous sites, does it include some of them or completely independent?

Authors:

We believe that this paragraph suits best in the current section, especially since it is entitled “study area and sites”.

We will add the coordinates to the revised ms, in particular to the overview table of the study sites that Referee 1 requested.

We believe that it rather cumbersome to present the distances for all the combinations of sites; furthermore, these distances can be easily derived by the reader from the scale in Figure 1.

We will also add the expositions, slope angles and a rough indication of plantation age to the overview table of the study sites that Referee 1 requested.

We believe that Figure 1 clearly shows which of the study sites are located within the experimental catchment; furthermore, we have indicate on line 18 that the catchment was located within the burnt area.

Referee:

Pg 453, L 23

What is “ca”?

Authors:

We will substitute ca. by “approximately” to avoid confusion.

Referee:

Pg 454, L 3

Re-write: “Polyacrylamide has” or “Polyacrylamides have”.

Authors:

We will correct this mistake.

Referee:

Pg 454, L 11

Re-write: “instrumentation was completed”.

Authors:

We believe that the correct tense is indeed “had been”.

Referee:

Pg 454, L 11-13

This is not acceptable: has the reader to find and read four articles to know all details of experimental set-ups? Please, provide all relevant details here, including these citations if you like.

Authors:

We believe that the current description contains most of the relevant details and that the referred sentence is indeed a bit over the top. Therefore, we will carefully review which further details need to be added to the revised ms and refer to the other publications in another manner.

Referee:

Pg 454, L 18

How many samples per site/catchment (if any)? Not clear in the previous text.

What are the sampling dates (“the first year after the wildfire” is not enough).

What is the S site (OK, in the figure, but not mentioned previously in the text)?

Authors:

Also in line with the suggestion of Referee 1, we will add a table to the revised version of the paper that summarizes site characteristics as well as number of samples, exact sampling period. We will further clarify in the revised text what site S stands for, by referring the site codes in the last paragraph of section 2 and specifically mentioning site S.

Referee:

Pg 454, L 24

Re-write: "filter paper".

Authors:

As suggested, we will rewrite "paper filters" to "filter paper" in the revised ms.

Referee:

Pg 454, L 25

Previously dry or field moist? May look obvious, but it is not.

Authors:

We are not sure if we understand the question as the filter paper in question was not employed in the field but in the laboratory.

Referee:

Pg 456, L 3

In absence of a test for comparison of medians, we cannot accept some of the statements here. The same problem exists for sections 4.1.2, 4.2.1 and 4.2.2.

Authors:

In line with what Referee 1 also suggested, we will statistically test the differences in sediment concentration between the samples sets and include these test results in the revised ms, simplifying the first part of this section and the ensuing similar section.

Nonetheless, we do believe that we can affirm that differences are marked, even if differences are not statistically significant. In this respect, we also want to stress that we are simply providing a description of the different sample sets, which, in turn, serves as possible justifications for the differences in the curve fittings for the different sample sets.

Referee:

Pg 457, L 1

Re-write: "Among-site".

Authors:

We believe that "between-site" is more appropriate in this case.

Referee:

Pg 462, L 2-24

I strongly suggest re-writing conclusions grouping all text in one paragraph, avoiding items lists.

Authors:

We have addressed this matter under the general comments.

Referee:

Table 1

Use capitals for first letters through the table.

Substitute "no. samples" with "N".

"OM" has not been used in the main text and is not defined in the caption.

Table 2

See coments for Table 1.

Table 3

See comments for Table 1.

Authors:

As suggested, we will use capitals for first letters, substitute “no. samples” by “N” and define “OM” in the title or legend of the revised tables 1, 2 and 3.

Referee:

Figure 2

Use capitals:

“Normalized ...”.

“Sediment concentration ...”.

Abbreviations in the caption do not correspond with the legend in the figures (eg, “PAM” versus “S_PAM”).

Authors:

As suggested, we will use capitals and correct the abbreviations in the caption in the revised Figure 2

Referee:

Figure 4

Abbreviations in the caption do not correspond with the legend in the figures (eg, “CTRL” versus “S_CTRL”).

I suggest using “(slope)” instead of “_slope” or “micro-plot” instead of “_micro” in the legend. Legend must be re-written.

Authors:

As suggested, we will use correct the abbreviations in the captions in the revised Figure 4.

Referee:

Figure 6

You have pretty space. Why not writing “eucalypts” instead of “euc.”?

Explain why points and line for “catchment” are different.

However, I would delete points for catchment, as only function lines are represented for the rest of variables.

Is it possible to add some graphical measure of exactitude or confidence for lines?

Authors:

As suggested, we will substitute the abbreviation “euc.” for the full word in the revised Figure 4 and we will clarify the differences between the points and the line for “catchment”. However, we prefer to maintain the points as they give some idea of the scatter around the line. For the same reason, we have presented points as well as fitted curves in Figure 2 (micro-plots) and Figure 4 (slope-scale plots). We have not done so in Figures 3 and 5 for the sake of “readability”. This readability is also the reason why we have not introduced a graphical measure of exactitude or, e.g., 95% confidence intervals in the different figures; at the same time, however, this exactitude is indicated in the last column of Tables 1, 2 and 3.