

We would like to thank the anonymous referee for his/her careful review of the manuscript and for providing these comments and suggestions to which we respond in detail below.

Reviewer's comment	Reply
It is not yet entirely clear to me how different these areas are in terms of land cover, climate, and geology although this might be very clear for the authors who are familiar with the region. I would find it helpful to have the two potential source areas delineated/indicated in Figure 1 (eventually by adding some text to the legend)	We thank the referee for mentioning this difficulty. Informations were added in the text (Lines 175-176) and in the title of figure 1.
L21: Eastern	This typo was modified
L23: Can you check writing? "this source contribution was ... controlled by stationary rainfall" (?)	This sentence was clarified (Line 23).
L32: amplified the quantity (?) -> There is no info on quality of sediments in the sentences above, so not clear what is being referred to	"quality" was removed from this sentence.
L33: lifespan of the reservoir (?)	We thank the referee for pointing out this typo.
L52: data on sediment loads from gauging stations, ... (?)	This suggestion was added to the text (Line 52).
L54: north of the western Peruvian Andes (3° - 6°S)	Modified (Line 53).
L55: for the northern Andes where sediment yields of were reported for rivers... Ecuadorian (?) Andes -> I think that Vanacker et al (2015) reports on the Ecuadorian Andes.	We thank the reviewer for pointing out this error. Columbian was replaced by Ecuadorian line 55 .
L56: you can probably delete the values in mm/yr, and stick to the values reported in t/km ² /yr for consistency.	Values in mm/yr was removed.
L58-59: I would remove "with agriculture as the main user" as it somewhat evident for "irrigation"	This part was deleted.
L60: Please check wording: "animal and human food supply"	This sentence was modified (Line 60).
L77: whereas OR meanwhile -> check wording	Meanwhile was removed from this sentence.
L83: Contrary to EENE (?)	Modified (Line 83)
L111: you could remove "of the dry forest area" as the sentence is a bit long and hard to read	As suggested by the referee this part was removed.
L144: "replace" instead of "intrude"?	Modified (line 144).
L145: "where natural vegetation is converted to grasslands and crops for ..."	We thank the reviewer for this suggestion (modified Line 145).
L174: "based on the main geological units that correspond to different land cover classes" (?)	This sentence was modified (Line 175).
L206-211: long sentence -> can you split the sentence in two parts for readability?	This sentence was spited in two parts (lines 206-210).
L220-225: Can you clarify if you produced a land use or land cover map, and check the wording in these lines?	A land cover map was produced. Wording was changed line 222 .
L234: followed by a vector edit (?)	Modified as suggested by the reviewer (Line 234)

L259: can you write "positive deviations" instead of "fluctuations", or is this not correct?	The term "positive deviations" is not correct here and was not modified in the manuscript.
L379: different state of degradation (?)	Modified (Line 379).
L385: demonstrated that	Modified (Line 385).