

## ***Interactive comment on “Hydrological trade-offs due to different land covers and land uses in the Brazilian Cerrado” by Jamil A. A. Anache et al.***

**Anonymous Referee #3**

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This paper describes an experimental approach at the hillslope scale concerning the possible water partitioning trade-offs due to the LCLUC dynamics. I think this paper is relevant since it studies water flux in the Cerrado biome. The manuscript is interesting and well written. The results are original and represent an important contribution to the understanding of hydrological processes in the Cerrado. However, my main concern is that the problem statement is not clearly defined and that the field experimental description is not sufficient as it is. I think the paper is well written and the relevant literature cited, however it requires major revisions. Suggested corrections: All acronyms of the equations that are in the text should be in italic and the equation with the unit (equation 8). Page 3: The figure 1, is it to highlight Brazil? the most important is the monitoring, the details in the photos are too small. Please improve visibility. Page 3:

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In sub-Section 2.2 Experimental setting and instrumentation-better describe the part of the monitoring. What was the measuring range for each equipment? What are the distances between the equipments? What is the size of the plot? What are the characteristics of the forest? (DBH, Height, Density) In table 1: Were used different equipment for monitoring the same variable in different plots (i.e. soil moisture)? What is the error of each piece of equipment? some tests were carried out to know the difference between devices? In figure 2, Why did not your measure soil moisture in the Bare soil? Please explain. Page 4: The paragraphs in lines 5 to 13, should be inserted in the sub-section 2.2. Page 5: How and when do you obtain soil field capacity and saturated hydraulic conductivity? Page 5, Table 3: remove this table, you can describe it in a paragraph. Page 6: In sub-section 2.4 and 2.5 describe more about these topics. Page 8, Results and discussion: I think you need to further describe the results and compare with other papers. The study would have been of more interest to readers if various published water flux models had been tested using the data. Page 12 Conclusions: The conclusion reads more like a summary of the paper.

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