

This paper is very interesting and important for evaluating runoff processes of montane cloud forest region and effects of vegetation covers on them.

Reply: Thank you for your positive comments and suggestions. Please find our replies to your comments and suggestions below.

One point I was concerned about, however, was the topographic effects because the study catchment with heavily grazed pasture was much gentler than the other two catchments. A discussion was made in the text by citing Sayama's paper (L. 12-17 in P. 5292), I suppose the evolution process of soil mantle may also affect the runoff mechanism: the soil mantle on hillslopes in MAT and SEC sometimes failed and evolved after the failure again because of the steep slope angles > 30 degree, whereas that in PAS was much stable (=18 degree) against a lower erosion force by storm rainfall. I hope that some more discussion can be added to Sayama's suggestion due to a large differences of topography if possible.

Reply: Soil profiles in the mature and secondary forests are well developed and deeper in comparison to the pasture (we have incorporated more information about the soil profiles in Study area, as requested by Reviewer #3). In addition, forest soils are characterized by low bulk densities, high porosities and high infiltration capacities (Table 1). All this combined allows water to infiltrate quickly and percolate through the soil mantle via vertical preferential flow paths. Furthermore, the fact that in the forests soil profiles at near-stream riparian areas are generally shallower than at mid and ridge hillslope locations indicates low erosion rates and little downslope mass movement (slope stability), despite the steepness of the catchments.

To strengthen this part of the discussion, we have stated: "...If so, the fact that forest catchments have steeper slopes and deeper soil profiles as compared to the pasture might be an alternative explanation for their higher baseflows during the dry season".

Some points I have noticed are: 1) L19 in P 5275: 'calibrated with field-derived rating curves generated via volumetric- and salt dilution measurements of discharge' I have not understood the calibration method. I suppose the relationship of water level in the weir to discharge was calibrated by the manual-measuring value of water discharge from the weir by a bucket. Does the volumetric measurement mean this method? I have

no experience of the calibration using 'salt dilution measurement'.

Reply: Indeed, the volumetric measurement of discharge consisted of manually measuring the discharge from the weir. The salt dilution method is a traditional method for measuring discharge of streams. For more information, please refer to the article of Hongve (1987), *Hydrological Processes*, 1, 267-270.

2) L23 in P 5283: I am not familiar to the 'quickflow event ratio'. The description of meaning is expected in the text.

Reply: The term "quickflow event ratio" refers to the ratio between quick flow and rainfall on an event basis. The corresponding explanation is provided in the Methods Section 2.4.1.

3) L23 in P 5286: I hope that the meaning of 'the average uncertainty' and the method of its calculation are explained in the text.

Reply: We have re-phrased this sentence for clarification. The text now reads: "The uncertainty in the derived pre-event water fractions (section 2.4.4) for ^2H was, on average, 9, 10 and 7% in the MAT, SEC and PAS, respectively, and 16, 20 and 20% for ^{18}O , respectively." Section 2.4.4 provides a brief description of the uncertainty calculation based on the method proposed by Generaux (1998).

4) L1- in P5288: I can understand the differences in relationship between EC and discharge in the text and Fig. 7. However, are the words 'clockwise' and 'counterclockwise' suitable for the differences? These words can be used when illustrating the relationships on an X-Y figure, but no figure is found. Hopefully some improvement of description will be needed for an easier understanding of your discussion.

Reply: We agree with the reviewer comment. Hence, more explanation about the discharge-EC relationships has been provided in the revised version. Furthermore, we have included a figure in the ms (Figure 7) showing the hysteresis loop patterns observed for different storms throughout the wetting-up cycle period.