

## ***Interactive comment on “Minimum forest cover for sustainable water flow regulation in a watershed under rapid expansion of oil palm and rubber plantations” by Suria Tarigan et al.***

**Suria Tarigan et al.**

suriatarigan2014@gmail.com

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There are at least two approaches to construct relation between the proportion of the land use/cover and the hydrological characteristics in a watershed scale, namely empirical and distributed hydrological model approaches. Empirical approach requires long-term discharge data for each of the 48 sub-watersheds in our study area. These data are lacking particularly in our study area. The distributed hydrological model approach uses sets of physical-hydrological laws and collected bio-physical parameters such as soil, topography and land use/cover for model inputs. We used the hydrological model approach in our study. We validated the model results following standard proce-

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dures for the calibration and validation processes of the SWAT hydrological model. In addition, we also carried out some field experiment and data collection to validate the C and BFI values as it was explained in the manuscript.

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