

## ***Interactive comment on “Towards quantifying the increase of rainfall interception during secondary forest succession” by B. Zimmermann et al.***

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This article represents an interesting perspective in helping bridge the gap in understanding the land cover dynamics and its relation between forest succession and canopy interception. The results highlight that: canopy interception changes rapidly during forest succession; a parsimonious (simple linear regression) model based on the ratio of the basal area of small stems to the total basal area outperformed more complex multivariate models (BMA approach); the influence of young secondary forests on interception in real-world fragmented landscapes might be detectable only in regions with a substantial fraction of very young forests (Zimmermann et al., 2013).

Because of the importance of rainfall interception on streamflow estimations, (Crock-

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ford & Richardson, 2000; Huang, Chen, & Lin, 2005) reliable predictions of this component is important for water resources management. However, characteristics of forests (and secondary succession forests) are usually difficult to quantify. In particular, there is a general difficulty in the estimation of throughfall. The authors have used a method which is novel in the estimation of throughfall in succession forests. This method and work is important in advancing our understanding in throughfall estimation.

References:

Crockford, R. H., & Richardson, D. P. (2000). Partitioning of rainfall into throughfall, stemflow and interception: effect of forest type, ground cover and climate. *Hydrological Processes*, 2920(April 1999), 2903–2920.

Huang, Y. S., Chen, S. S., & Lin, T. P. (2005). Continuous monitoring of water loading of trees and canopy rainfall interception using the strain gauge method. *Journal of Hydrology*, 311(1-4), 1–7. doi:10.1016/j.jhydrol.2004.08.036

Zimmermann, B., Zimmermann, a., Scheckenbach, H. L., Schmid, T., Hall, J. S., & Van Breugel, M. (2013). Towards quantifying the increase of rainfall interception during secondary forest succession. *Hydrology and Earth System Sciences Discussions*, 10(6), 7999–8029. doi:10.5194/hessd-10-7999-2013

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