Hydrology and
Earth System
Sciences

Discussions

EGU

Open Access

Interactive comment on "Regionalization with Hierarchical Hydrologic Similarity and Ex-situ Data for the Estimation of Mean Annual Groundwater Recharge at Ungauged Watersheds" *by* Ching-Fu Chang and Yoram Rubin

Anonymous Referee #2

Received and published: 14 February 2019

1. This paper should focus more on process controls.

From what I understand of their nested tree framework, whilst building individual BART models for each domain (climate, geology, soils etc) and evaluating them using CART may help understand where each domain is the dominant control on recharge. Each BART model by itself has limited predictive ability in ungauged watersheds because it is only trained using variables from one domain. If you wanted to use BART models for prediction in ungauged watersheds, perhaps one or an ensemble of BART models which have been trained on all the possible variables would be a better option, as

C1

this would capture the interactions of variables from different domains when predicting recharge.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2018-561, 2019.