Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., community comment CC1
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Comment on hess-2022-2

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Community comment on "Flood generation: process patterns from the raindrop to the ocean" by Günter Blöschl, Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2022-2-CC1, 2022

I read the "review" paper by Prof. Bloschl in less than one hour. Of course, it is written very well and it is really easy to follow the overall narrative from the beginning to the end (as to follow the rain drop from the soil to the ocean!).

However, I believe that the main questions are still there, they are highlighted but not addressed. How to move across scales? Are there physical relationships that can be applied across scales in hydrology?

Similarities across scales are evident (preferential flow in soils, river over landscape, atmospheric river, ...)...but how to exploit these similarities in our modelling?

Solving this issue will help in addressing a fundamental topic in recent time, how to perform high resolution hydrology? How to address the interactions between the water cycle and the human intervention?

I am aware that it's a very challenging topic and whoever will solve the problem will give an outstanding contribution to hydrology.

I am very interested to know the opinion of the author, and of my colleagues who will like to contribute.