This is my 2nd review of the manuscript "SPHYv2.0: Spatial Processes in HYdrology". I have reviewed the manuscript and I believe that the author produced a much improved manuscript addressing my major and minor comments/suggestions. Prior to acceptance, I am raising some minor comments.

I personally understand authors' arguments for calling the model SPHY v2.0. However, to me it would still be better to name the model SPHYv1.0, since the model has not been cited anywhere in the literature as v1.0? I think it would also be clear for the readers/potential modellers. In addition, note that the name SPHY (without v2.0) is used in various locations in the text. In any case I respect the authors argument and I leave the final decision to them

My additional comments are:

Abstract

Line 13:

I think that points (ii) and (iii) need to be better presented. Maybe: "ii) has the flexibility to be applied at a wide range of hydrologic applications, and iii) at various scales…"

Line 17:

I am not satisfied with the word simulation in the "the simulation of dynamic vegetation cover" since you refer to processes in this sentence. How about "the dynamic evolution of vegetation cover" or something similar?

Introduction

Lines 90-99

I personally disagree. The difference is that these models (particularly referring to HYPE) operate at a subbasin scale in contrast to a fully distributed approach operating at a grid level. For instance, HYPE is applied operationally in Sweden at a spatial resolution of 10 km2.

Line 108:

Is Table 2 referenced before Table 1? Please check.

2.3 Reference and potential evapotranspiration

Extraterrestrial radiation is cited as Ra in Equation 1 and as RA in the text.

My final comments are about information given in Table 2 about the HYPE model. Note that my feedback is based on my experience with the HYPE model, so I cannot fully guarantee that the Table is accurate for the other models as well.

Dynamic vegetation growth: should be "*1"

Floods: should be "+". See for instance Arheimer, B. and Lindström, G.: Climate impact on floods: changes in high flows in Sweden in the past and the future (1911–2100), Hydrol. Earth Syst. Sci., 19, 771-784, doi:10.5194/hess-19-771-2015, 2015.

Water supply and demand: should be "+"

Catchment scale: should be "+"

Global scale: should be "-"

Farm level: should be "+" from various applications in Sweden

Country scale: should be "+", since HYPE is the operational model in Sweden

Flexible spatial resolution: should be "+", since the scale in HYPE can be easily controlled and altered

Hourly resolution: should be "+". We currently have the model running on a 1-hour timestep.

Sub-daily resolution: should be "+". We have the model running on a 3-hour timestep.

Forcing with remote sensing: should be "+". See applications of HYPE in the Arctic and Indian domain. Pechlivanidis, I. G., & Arheimer, B. (2015). Large-scale hydrological modelling by using modified PUB recommendations: the India-HYPE case. *Hydrology and Earth System Sciences Discussions*, *12*, 2885–2944. doi:10.5194/hessd-12-2885-2015

GIS compatibility: should be "+". The output files can also be linked with GIS.

The option of "Global scale" for the LISFLOOD model should be "+". See Alfieri, L., Burek, P., Dutra, E., Krzeminski, B., Muraro, D., Thielen, J., & Pappenberger, F. (2013). GloFAS global ensemble streamflow forecasting and flood early warning. *Hydrology and Earth System Sciences*, *17*, 1161–1175. doi:10.5194/hess-17-1161-2013

Note that there are typo mistakes in "Flexible spatial resolution" and "Flexible output reporting options"

I would like to congratulate the authors once again for this article.

Best regards,