

Interactive comment on “Relative impacts of land use and climate change on summer precipitation in the Netherlands” by E. Daniels et al.

E. Daniels et al.

emmadamme@gmail.com

Received and published: 15 July 2016

Thanks for your timely and positive comments.

Regarding the first comment about extreme precipitation patterns, we foresee expanding the last paragraph of section 3.1 and/or adding a figure with e.g. the 95th percentile distribution of precipitation for the REF, REF+1 and FUT+1 case.

For the second comment, regarding the role of impervious surfaces, accessing this on a high(er) resolution for the current study is somewhat out of scope. Impervious surfaces are however taken into account implicitly by WRF in the Urban Canopy Model and its parametrizations. From the results of this study and a previous study, the role of impervious surfaces seems to be substantial because they alter the surface water balance and related sensible heat flux, so this is certainly something to keep in mind in

C1

future work.

Finally, land surface temperatures are simulated very accurately by the model (much better than precipitation) so this has already been taken into account. In an earlier paper - Daniels et al 2015a, referred to in the reference list – this has been shown and discussed in detail, also in relation to the urban heat island.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-146, 2016.

C2