Comments to the Author:
Thanks to the two reviewers and the authors for a constructive discusion.

I agree with reviewer #2 on the concerns re fig 2. There are actually two points in his/her critic: 1) classification of something which already is classified, 2) value of this statistical analysis. In your response you focus on the latter, but the first would also deserve attention. Regarding the second point, I have to admit tha I also found this part of your manuscript difficult to understand, and I am looking forward to the revised version, which hopefully helps me to better understand this analaysis/results.

In detail, the comment about Fig.2 is not pertinent; there is no re-classification of what has been classified. This suggests that the reviewer does not understand this figure, or the OPLS method. We hope that this has now been clarified with the new revised manuscript where the first two sections of the revised Results will guide the reader towards understanding Fig. 2. We have also rewritten this section in the methods to clarify figure 2.

One important issue, which has been raised by reviewer #2, is the issue on maps versus (blind) statistics to evaluate the indices against ground truth. I can see both his/her point and the authors' point, that one wants to be able to provide some 'objective' evaluation. Improved statistical evaluation approaches, taking patterns, distances etc. into account, might be the way forward. Please see, for instance, the paper by Güntner et al., 2004, which you already cite, for a number of possible evaluation statistics. (Some of) these might be a useful way to quantify, what ones eye easily would see (but subjectively) from a map.

If we had a comprehensive survey of wet spots across the Krycklan basin, then we agree that would have been a great idea. Especially distance measures would have been interesting. However, in our study we validate the map models against transect data. Hence, we don't have any information regarding the surrounding cells, which makes it difficult to compare with the methods used in Güntner et al.

In the future we might GPS track all wet areas in Krycklan, but at the moment we don't have the funds for such a filed survey and this is outside the scope of this article. We believe that the emphasis should remain on the select transects analysis rather than a comprehensive survey of wet spots across the Krycklan basin, or part thereof.

Jan, outside the scope of this article; if you are interested you could send us the DEM (50x50 m2 or something better) for the Brugga basin to us, we would be glad to map DTW for that area, and we would then visually and statistically compare that pattern with all the other 11 wetness indices. Perhaps for some future collaboration?

Regarding a point by point response to the reviews and a list of all changes in the manuscript, please see the previously uploaded duscussions.

Anneli Ågren and coauthors