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Interactive comment on "Deduction of Reservoir Operating Rules for Application in Global Hydrological Models" *by* Hubertus M. Coerver et al.

Hubertus M. Coerver et al.

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Dear Dr. Galelli,

First of all, thanks for the interest and the comments.

1. We agree that currently less data intensive algorithms are the most ready-to-use technology available for regional and global studies. However, with the development of cloud-computing services, like for example the Google Earth Engine, we expect it will be become easier and more straight-forward to apply the method suggested on lines 23-28 (page 23) than it is now.

2. The integration of errors in the prediction of the release over time is indeed a seri-

ous problem when implementing ANFIS into a simulation model. This problem could be overcome however, by correcting the storage once a new (remotely sensed) measurement of the actual storage is available. In case no correction is applied, indeed close attention should be paid to make sure the storage does not become unbounded (i.e. become very large or negative). Additionally, two simple rules could be added manually ("if storage = 0 -> release = 0" and "if storage = max -> release = max") in order to make sure the storage remains bounded between 0 and the maximum storage.

3. The use of cross-validation is a interesting suggestion, since indeed the presence of a dry year in the validation-set can undermine the results. As the length of the entire dataset increases however, the effects of a dry year will also decrease.

4. Hejazi et al. (2008) indeed looks like a very interesting and relevant study, thank you for pointing to it.

In the revised version of the article, we will make sure the answers to your comments are incorporated.

Regards, Bert Coerver