Hydrol. Earth Syst. Sci. Discuss., 8, C3356–C3357, 2011
www.hydrol-earth-syst-sci-discuss.net/8/C3356/2011/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Dynamic versus static neural network model for rainfall forecasting at Klang River Basin, Malaysia" *by* A. El-Shafie et al.

Anonymous Referee #1

Received and published: 10 August 2011

The manuscript presents dynamic versus static neural network model for rainfall forecasting at Klang Gate, Malaysia, which is interesting. The subject addressed is within the scope of the journal. The manuscript is well organized and understandable and easily to follow. However the manuscript, in its present form, contains several weaknesses and could be improved if the authors considered the following comments to strengthen the position of the manuscript. Adequate revisions to the following points should be undertaken in order to justify recommendation for publication.

1. Few references are cited but do not appear (Noureldin et al, 2011 and Elshafie and Noureldin, 2011) in the References section.

2. Some justifications should be provided on using the back-propagation algorithm,

which has the drawbacks of local convergence and slowness.

3. Usually using the third order model (i.e., the rainfall at time t-3, t-4 and t-5 still has impact on the inflow at time t) is physically probable for this problem, especially for the wet period months.

4. Many assumptions are stated in various sections. More justifications should be provided on these assumptions. Evaluation on how they will affect the results should be made.

5. The key ANN parameters are not mentioned. The rationale on the choice of the particular set of parameters should be explained. Have the authors experimented with other sets of values? What are the sensitivities of these parameters on the results?

In the conclusion section, the limitations of this study, suggested improvements of this work and future directions should be highlighted.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 6489, 2011.