

Interactive comment on “Generalized drought assessment in Dongliao river basin based on water resources system” by B. S. Weng et al.

Anonymous Referee #2

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The authors proposed a new drought index (Generalized Drought Assessment Index) in the paper. The new index incorporates both natural and artificial water cycle, and the authors proved its feasibility by comparison with other commonly used drought indices. This paper provides new method for drought assessment under environmental change conditions. The paper is well organized, but there are still some points that should be clarified. In my opinion, the paper could be accepted and published after minor revision. The comments can be found as follows: (1) Page 6706 Line 3, “metrological drought” may be “meteorological drought”. (2) In “Introduction section”, the authors listed many drought indices. It is suggested that the advantages and disadvantages of some commonly used drought indices be introduced. And then illustrate the necessity of the proposed GDAI. (3) Page 6708 Line 25, the sentence “the precipitation is de-

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creasing from. . .” is not clearly stated. (4) In section 2.2, the hydrologic model is a very useful tool for GDAI, so the authors should describe the model structure simply. (5) It is suggested that the standard of model assessment should be described in detail, for example, how to calculate deviation and Nash coefficient. (6) Page 6714, Line 8, for the phrase “the centers of gravity” is not well defined. It can be illustrated in another way. (7) Page 6716, Line 11, please explain why “the results simulated by GDAI are better than the SPI”. (8) Page 6716, Line 16, the word “though” may be changed into “while”. (9) Page 6718, Line 17, “underlying conditions” may be “land use/land cover”. (10) In figures 8, 9, 10, 12, 13, 15, 16, the legend “DI” may be “GDAI”

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