

In my opinion the authors have made an improvement in analyzing and interpreting drought features from 2000-2010 in the Poyang lake region. However, my main concern is whether the authors correctly applied SPI concept in defining SLI. Before defining the SLI in their equation (1), the authors should evaluate and verify that the monthly (or 2 or 3-month) averaged lake level variation satisfies the Gamma-distribution. A figure showing this verification result, similar to Fig. 1 in the paper by Shukla and Wood (2008), should be presented. Such a result will provide evidence to convince the readers that indeed the lake level variation fits the Gamma-distribution and, thus, a form analogous to that used in defining SPI may be used to define the SLI. I seriously doubt that the lake level meets the Gamma-distribution because it is a different kind of variable from the precipitation or stream runoff which has accumulated values for specific time segments. Until such a distribution is verified equation (1) cannot be used to describe lake level variation and the results are meaningless. Therefore this manuscript in its current form cannot be accepted for publication.