

Interactive comment on “Behaviors of extreme water level in the Pearl River Delta and possible impacts from human activities” by Y. D. Chen et al.

Anonymous Referee #1

Received and published: 13 January 2008

The Pearl River delta has been the fastest developing region in China since the country adopted the 8220;open door and reform8221; policy in the late 1970s. On less than 0.5This paper analyzed extreme water levels based on monthly high/low water level datasets from 23 stations across the Pearl River Delta for past 48 years, with aim to understand long-term trend and associate spatial patterns of extreme water levels in the Pearl River Delta. Impacts of human activities on these changing properties have been discussed. To my knowledge, the first two points are the new findings by the authors though it is not enough to explain these results only based on some human activities such as sand dredging. In my opinion, their work is interesting and is reliable. Generally, this paper is well organized. Data and methods are proper for the current

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



research with good evidences. The conclusions are also believable, reliable and interesting. The work by the authors, particularly their new findings and explanations will be of great scientific and practical merits in local water resource management and management of hydraulic engineering infrastructure in the Pearl River Delta. Based on what mentioned above, I recommend the acceptance of this paper after the modest revision suggested as the following: 1) The data of 93.72) The authors are asked to address the process of missing data in the Data and Methods section. It can be seen from Table 1 that there are a lot of missing data in the stations located in the lower Pearl River Delta, e.g. Huangchong, Wanqingshaxi, Xipaotai, etc. stations. The existence of missing data will impact the results by linear regression techniques. I suggest the process of the missing data by the neighboring stations; 3) As for the decision of threshold values. The authors only mentioned that they decide the extreme values by exceeding/falling below mean±std, but how they deal with those values equaling to mean±std? 4) In the 8th line of P.4371, what does 8220;wo station8221; mean? They should make it clear. 5) In the second conclusion, they declared that 8220;Increasing precipitation however is identified in the North River basin and the East River basin. The summer precipitation in the North River basin is decreasing.8221; In which year do these precipitation changes occur? They should specify it. 6) In the 10th line of P.4373, 8220;Sanshi8221; should be 8220;Sanshui8221;; In the 12th line, the 8220;R8805;98221; shoul be 8220;R8805;0.98221;; In the 15th line, the statement of 8220;However, bad correlations are kept between8230;8221; is not proper. Based on Table 4, most correlation coefficients are good with little difference. They may be different in significance level. Therefore, the authors should decide the statistical significance of these correlation coefficients in Table 4 and alter the associated expression, reevaluate the correlation coefficients from significance levels.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 4361, 2007.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper