

Interactive comment on “An Investigation into the Relationship between Teleconnections and Taiwan’s Streamflow” by Chia-Jeng Chen and Tsung-Yu Lee

Anonymous Referee #2

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The purpose of this paper is to explore possible usage of some well documented and routinely updated teleconnection indices to predict the high-flow season (July-September) 3-month streamflow totals in Taiwan. The WP (West-Pacific), PJ (Pacific-Japan) and the QBO (Quasi-Biennial Oscillation) are identified as of the highest correlation with Taiwan streamflow among 14 indices. The authors intended to elaborate a point that despite high correlations, the non-stationary behavior of PJ and the streamflow time series hampers the predictability of streamflow seasonal forecast. It seems to me that the conclusion is the teleconnection indices or any predictor with CRS are of no use to Taiwan JAS streamflow prediction. Unfortunately, the authors failed to propose any alternative solution to overcome the problem, so the paper appears not yet

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ready for publication.

I suggest the authors to continue the research and take the following comments into account.

1. It is better not to use “relationship” in the title. Most discussion on “relationship” is more or less hand-waving with no evidence. For example, the discussion about possible relationship between QBO and Taiwan’s streamflow on Page 10 Line 13-21 is based on possible influence of QBO on the total number of TCs (Chan 2003) and TC tracks (Ho et al. 2009) without presenting any evidence to support the relationship between Taiwan’s streamflow variability and western North Pacific TC number or tracks. Similar weakness can be found in many places when the “relationship” is discussed.
2. Is QBO a better predictor than PJ? The correlation of PJ and Taiwan streamflow is highly influence by CRS but the correlation of QBO and the streamflow seems quite stable?
3. P11L19: Why is PDO selected most frequently as a predictor?
4. The last paragraph in the Summary and Conclusion is hard to understand. What is the “new predictor screening algorithm capable of accounting for CRSs”? Is the concept discussed in earlier paragraphs?
5. The new findings in this paper need to be sharpened and writing need to be more exact and concise.

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