

## ***Interactive comment on “Analysis of water use strategies of the desert riparian forest plant community in inland rivers of two arid regions in northwestern China” by Y. N. Chen et al.***

**Anonymous Referee #2**

Received and published: 5 January 2015

The authors of this manuscript tried to describe “comprehensively” the water use characteristics of desert riparian plants in typical arid regions of northwestern China. Their attempt itself is important in terms of raising fundamental information on tree ecology and hydrology of the wood lands in arid environment. However, this manuscript is not sufficiently describing those information “comprehensively”, and does not consists of complete structure as an original scientific paper in terms of following points.

1) They chosen two different study sites: “Lower reaches of the Tarim River” and “Lower reaches of the Heihe River”. However, substantial reasons of this selection were not described apparently. Also, an implication of the comparison between these two sites should be mentioned with explaining the geographical differences including

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the vegetation history etc. of those sites

2) Only two species of trees were selected for the investigation. The reasons and adequacy (how typical? why are those selected as representative trees?) of those selections should be explained. The implications of the comparisons between those two species were also not described explicitly.

3) Two of above points should have been described in the introductory section. Discussions and conclusion must be answers for the questions on those comparisons (between sites and tree species).

4) Moreover, in the introductory section, it was necessary to be described what kind of originalities were involved in their investigations of this manuscript, compared to the previously reported studies on similar subjects. Current citations in Introduction were just a list of previous studies.

5) Some of the observed data were presented only for *Populus euphratica*.

6) Many sentences in the Discussion and conclusion were redundant. Many of cited literatures did not have a point, in terms of direct discussions of their observed results.

7) As a consequence, it was unclear whether water use strategies and life mode that they determined from the results were unique in this study sites or generally found phenomena.

Individual points: Table 1: “Average precipitation” => “Average annual precipitation”  
“Average evaporation” : Is this potential evaporation rate? How did they estimate?

Figure 1: Scales of Y axes are different between (a) and (b). Those should be justified.

Figure 4: Scales of Y axes are different between (a) and (b). Those should be justified.

Figure 5: “. . . in the desert riparian forest” => “. . .in the study sites”

Figure 6: Explanation of “PLC” is needed in the caption.

Figure 7: Are those error bars needed?

Figure 10: Scales of Y axes are different among (a) - (d). Those should be justified.

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Interactive comment on Biogeosciences Discuss., 11, 14819, 2014.