

Interactive comment on “Water-use dynamics of a peat swamp forest and a dune forest in Maputaland, South Africa” by A. D. Clulow et al.

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Received and published: 11 February 2013

The paper provides as the author wrote site specific data for indigenous tree species, enhancing the knowledge of water use by trees in specific climatic and soil conditions. Moreover, it is important to take into account some details in respect to data collection and processing.

First, I want to arise some questions to have a clear view of the sampling procedure first:

1. How did you measure the water table in both sites to support the statements all over the paper?
2. Theoretically, the root distribution decrease along the soil profile, fixing the maximum

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amount of biomass in the first soil layers. However, the combination of different tree species and soil conditions can produce root biomass accumulation in depths lower than 20 or 30 cm. considering this, it is possible that the root sampling procedure ignores or neglects these erratic root patterns in both stands. Other detail in respect of the root sampling procedure is the type of roots that you measured within the sample: Those were fine roots? or Did you include gross roots?

3. The paper mentions the measurement of LAI at both sites. How did you perform this? Did you use a leaf area meter, hemispherical pictures, or the old traditional method of measure and weight the leaves?

Second, the following recommendations can be done with the available data to improve the analysis and give some remarks about the water use in both sites:

4. Apply the Bowen-Ratio method to calculate the real evapotranspiration and then differentiate the losses by tree transpiration and soil evaporation after the rain events.
5. Describe the stand composition in terms of number of individuals per specie (if plots are available). With this information the stand water use can be better understandable.
6. Do you mention in results the use of FAO-56 evapotranspiration equation, but it is not specify in the methodology section.
7. You can remove the figure 4 and replace it with a table, in this way you will show in a better way the sampling procedure and you will skip any wrong assumption in respect to the root biomass distribution.
8. Could be important to broad the discussion section, focusing the response of water use to rain events differentiating by duration and water quantity. Third, some minor corrections about the paper:

Pag 1726, line 11, change: "trees' roots" to "tree roots" Pag 1731, line 7, change "vegetation" to "vegetation" Pag 1732, line 3, change "mamsl" to "masl" line 26, has to be written as "meters above ground level" Pag 1737, line 4, What is the meaning of the

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number in brackets: (0339756W) Pag 1737, do you have to specify if the data is in MJ m⁻² per day or month Pag 1744, line 3-4, change "soil profile water content" to "soil water content profile"

Figure 1(a), change the Y axis to "Elevation (masl)"

Figure 5, change "Total soil profile volumetric water content" to "Total volumetric water content in the upper 1.5 m of soil profile at"

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 1725, 2013.