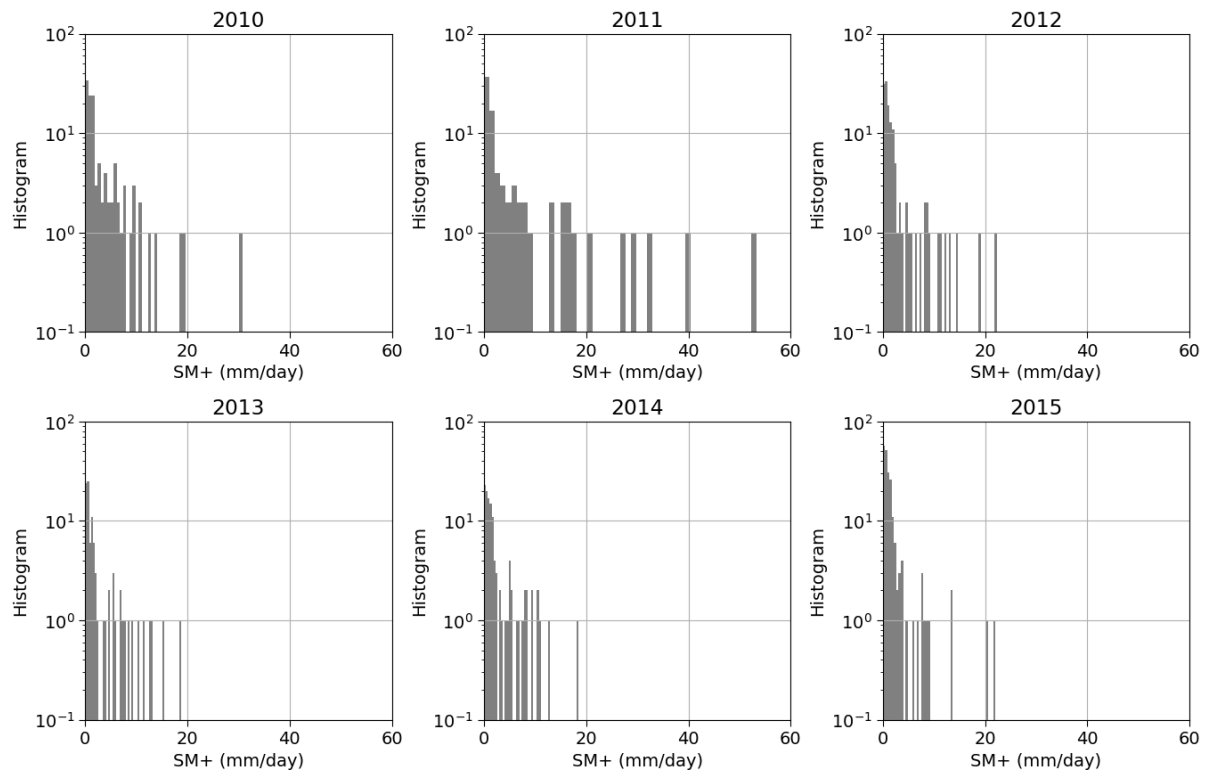
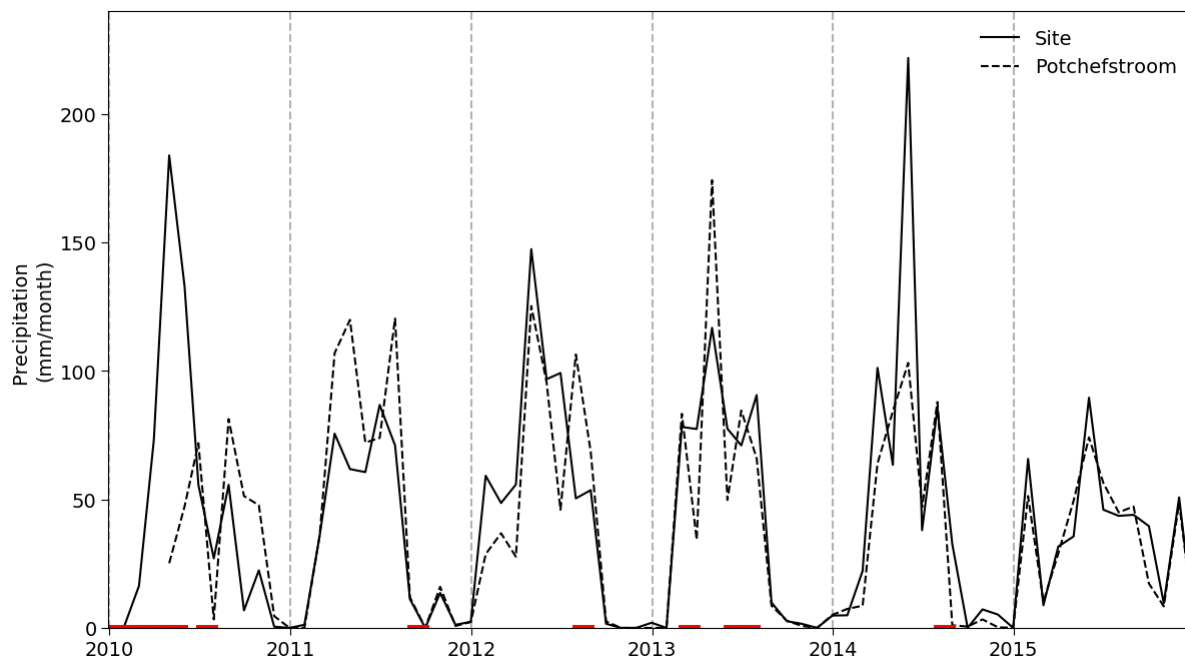


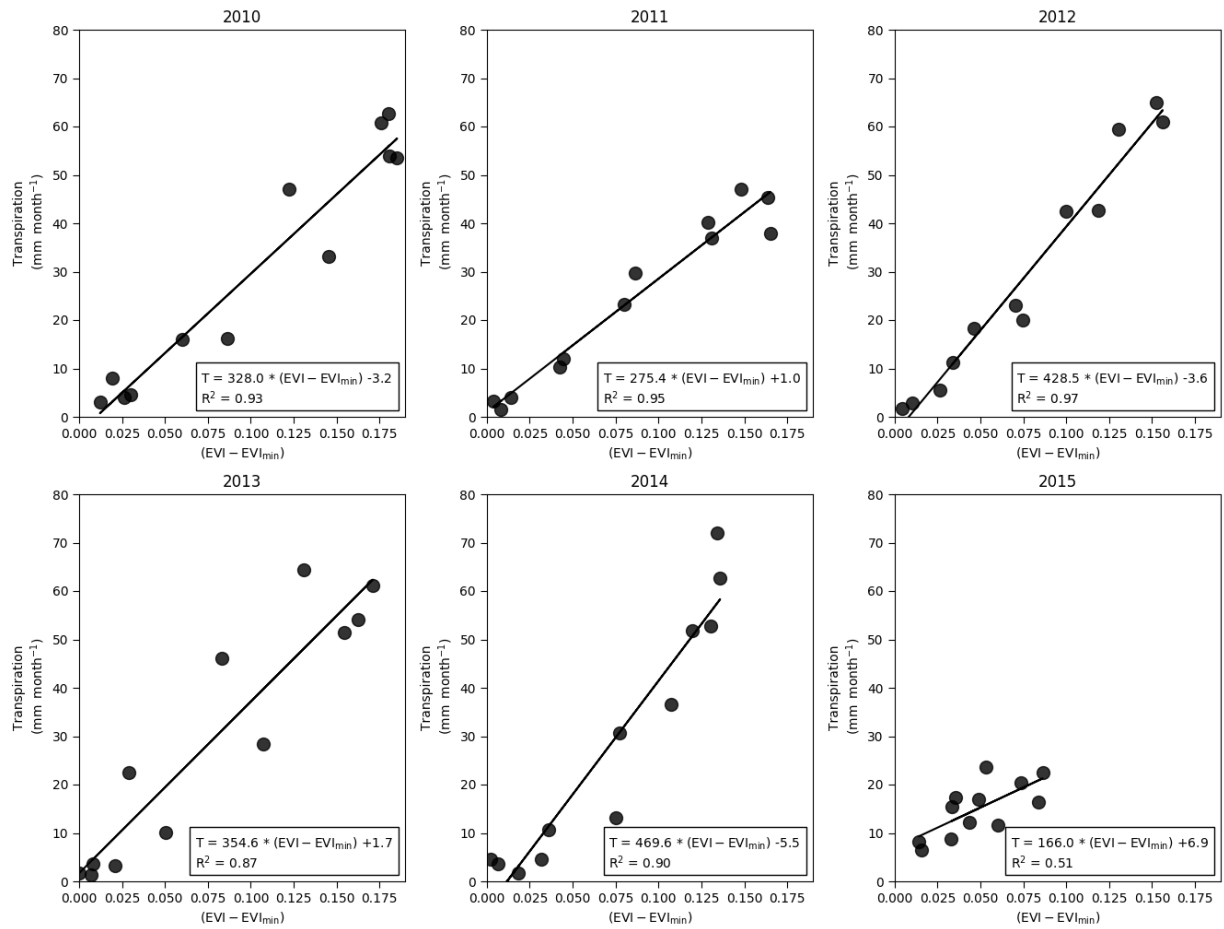
**Figure S1.** Monthly transpiration estimated using Berkelhammer method with mean night-time respiration (blue) and with exponential temperature function (orange) (Räsänen et al., 2017).



**Figure S2.** Histogram of mean daily soil moisture increase.



**Figure S3.** Time series of monthly rainfall at the measurement site and nearby weather station in Potchefstroom. The red lines indicate months when more than 10% of the Potchefstroom measurements were missing.



**Figure S4.** Relation between monthly EVI and transpiration.

## References

Räsänen, M., Aurela, M., Vakkari, V., Beukes, J. P., Tuovinen, J.-P., Van Zyl, P. G., Josipovic, M., Venter, A. D., Jaars, K., Siebert, S. J., Laurila, T., Rinne, J., and Laakso, L.: Carbon Balance of a Grazed Savanna Grassland Ecosystem in South Africa, *Biogeosciences*, 14, 1039–1054, doi:10.5194/bg-14-1039-2017, 2017.