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Supplement of

Annual evapotranspiration retrieved from satellite vegetation indices for the eastern Mediterranean at 250 m spatial resolution

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Figure S1. Main basins (>10 km^2) in the Eastern Mediterranean, used to compare annual ET estimates from PaVI-E, MODIS (MOD16) and MSG (LSA-SAF MSG ETa) (see Fig. 5 in main text).

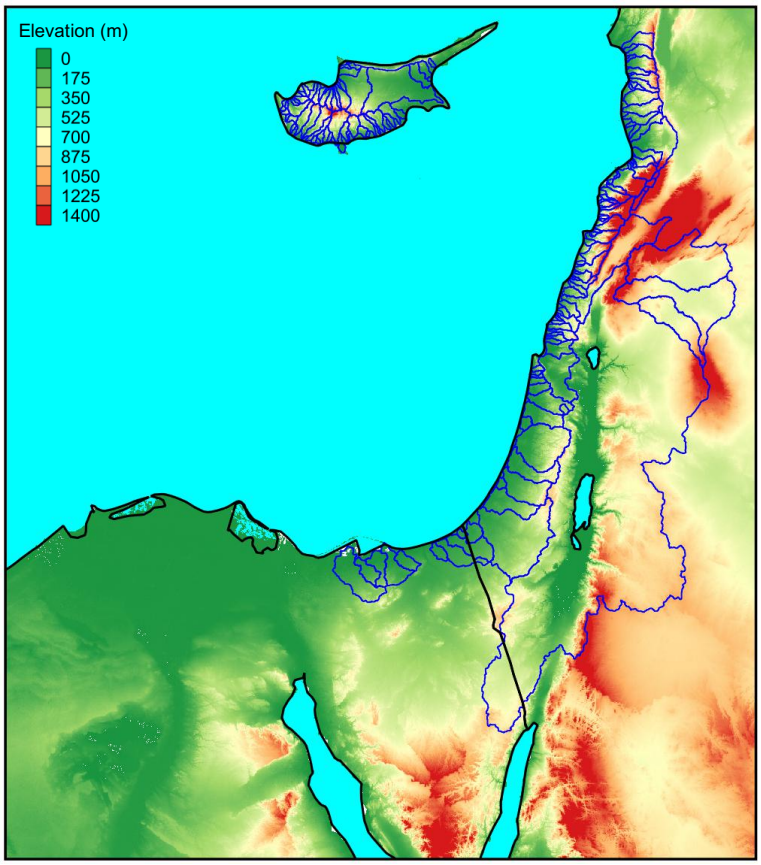


Figure S2. Location of six water catchments used to evaluate PaVI-E along the south-north rainfall gradient in the Eastern Mediterranean. ET from water catchments balances were calculated as $ET = P - Q$, for 2000-2013 (see in main text). MA-N, MA-CS, and MA-S are for north, centre-south and southern mountain aquifers, respectively. Contours of mean annual rainfall amount (isohyet) are also shown.

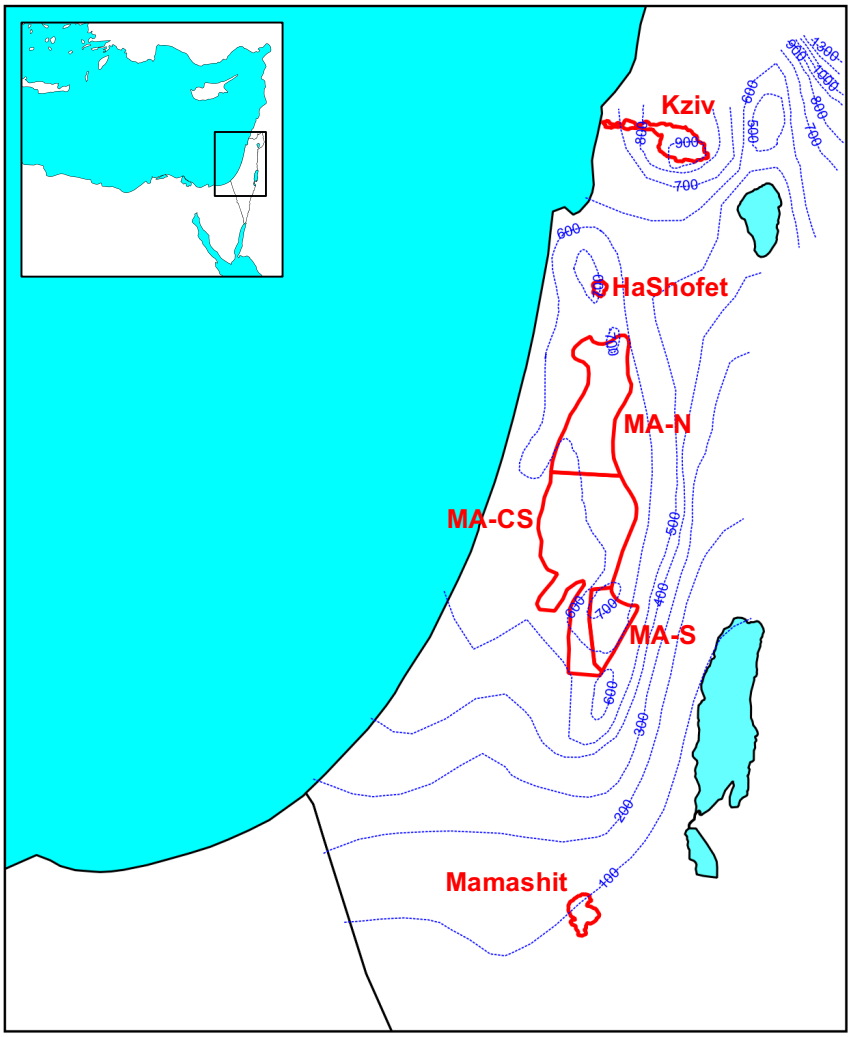


Figure S3. Seasonal and interannual time series of the eddy covariance ET at the PA sites. The vertical dashed line indicates the beginning of the year (from January 1).

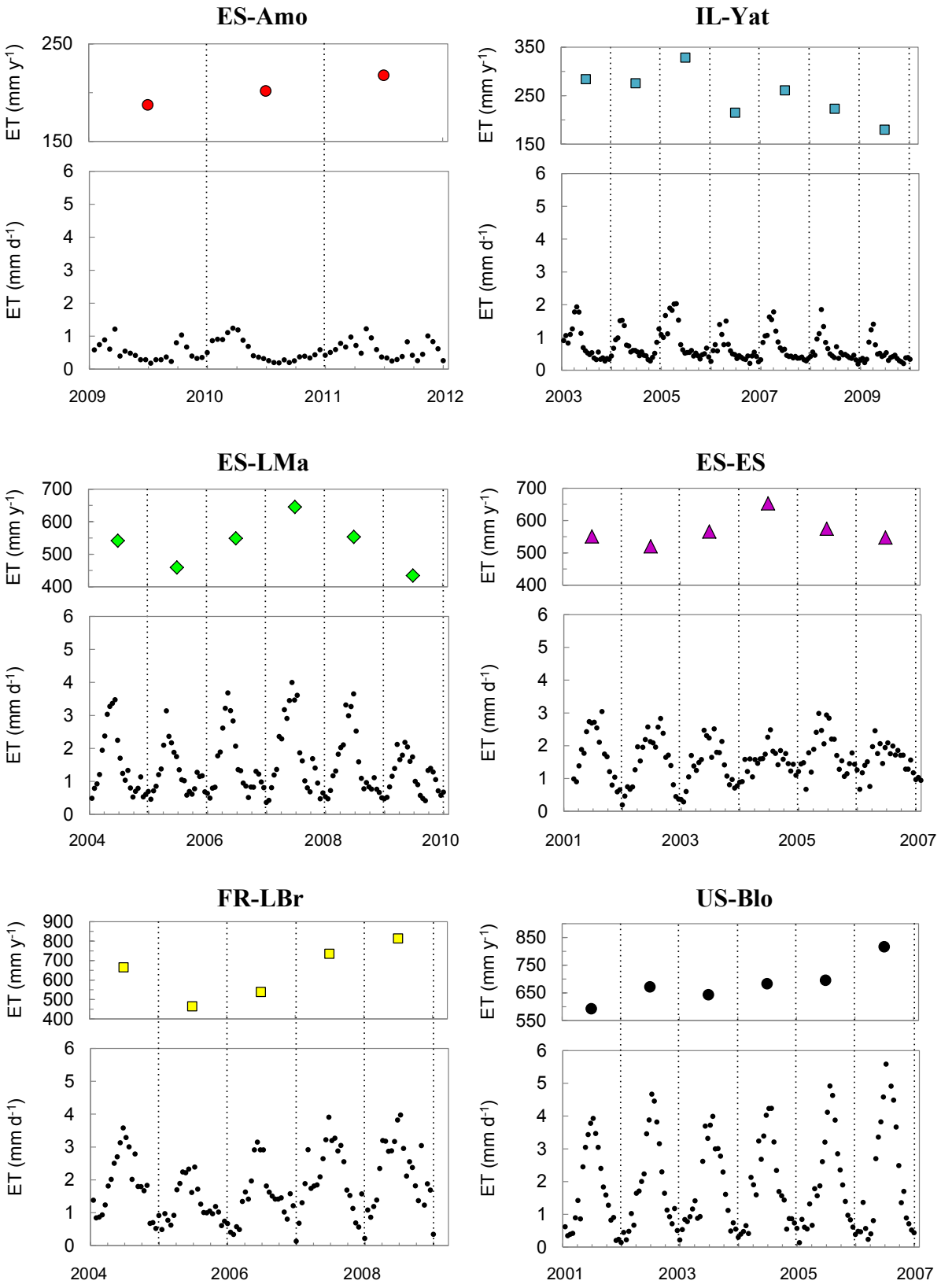


Figure S4. Seasonal and interannual time series of the eddy covariance ET at the AN sites (**CRO**: ES-ES2, IT-Cas, US-Bo1, US-Ne1, US-Ne2 and US-Ne3; **GRA**: US-Var, US-Kon, US-Wkg and US-Goo). The vertical dashed line indicates the beginning of the year (from January 1).

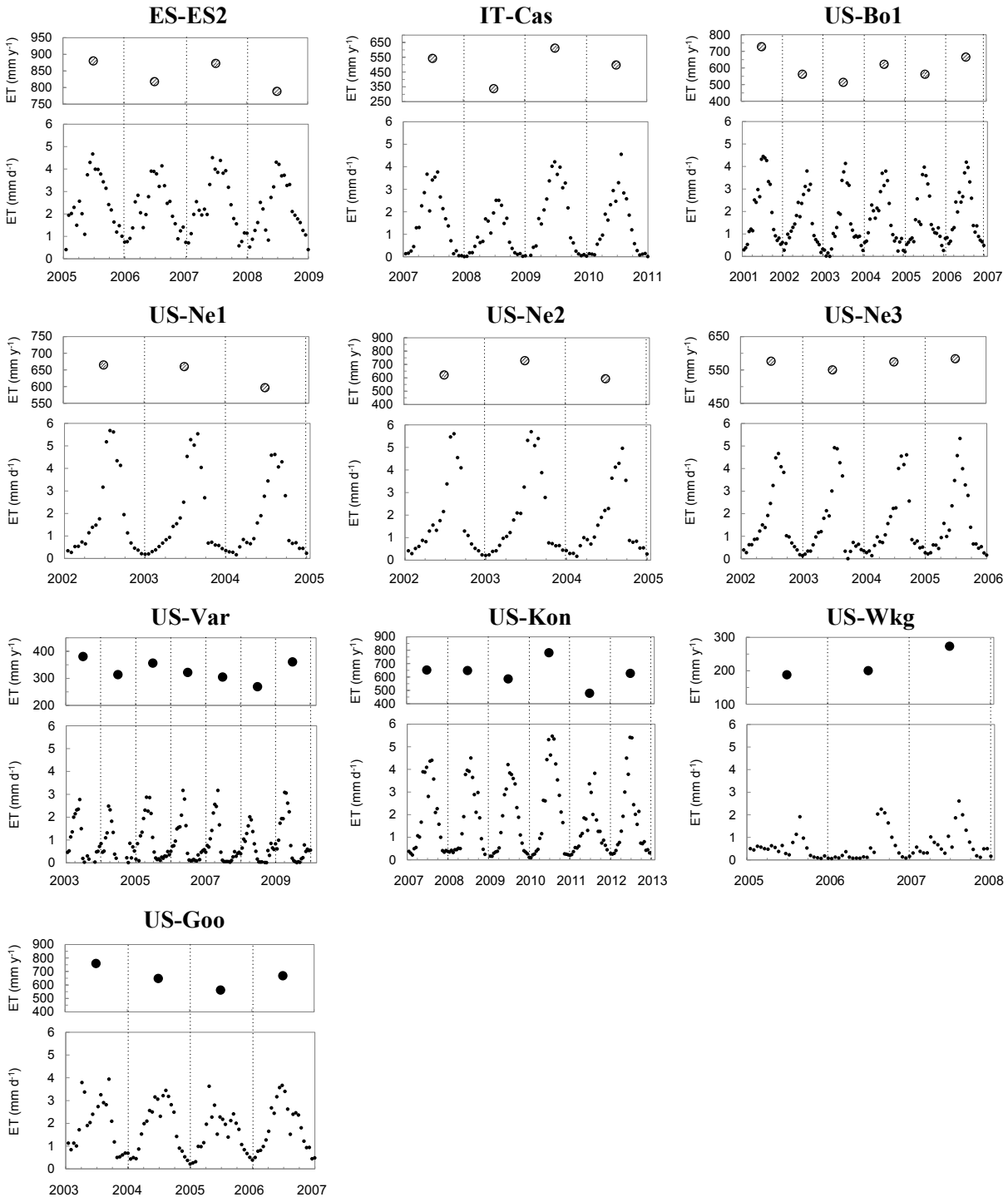


Figure S5. Mask map used to apply PaVI-E model for annual (AN) and annual + perennial (PA) vegetation systems in the Eastern Mediterranean. Pixels identified as AN are shown in red, while remaining land cover is classified as PA (see explanation in main text - Section 3.3). Water bodies are shown in cyan colour.

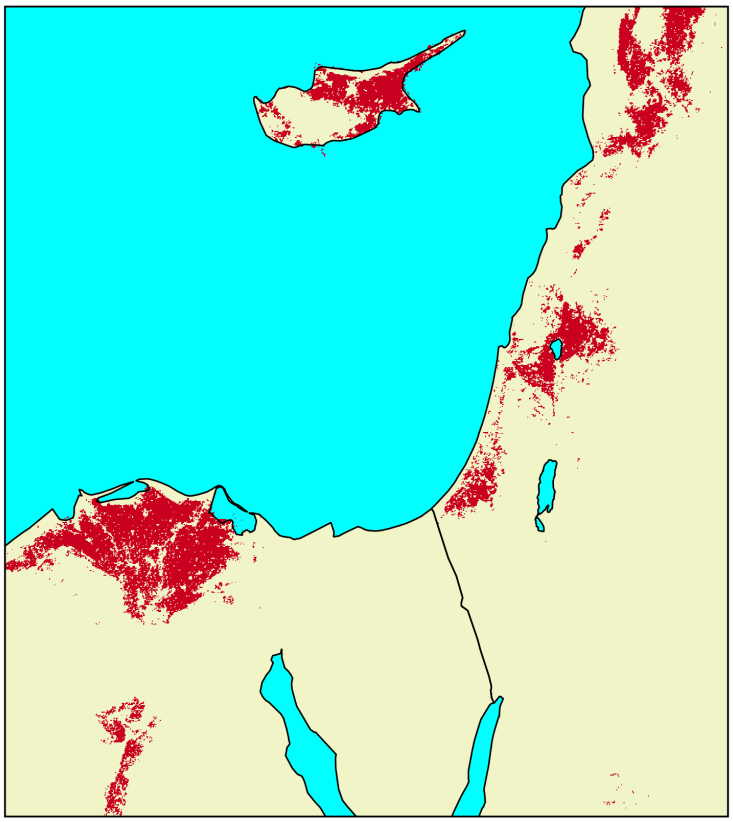


Figure S6. Scatter plots of the 16-day eddy covariance ET vs. MODISs' vegetation indices (NDVI and EVI) and the modified TG model (Sims et al., 2008), for **(A)** annuals vegetation systems (AN), and **(B)** perennials + annuals vegetation systems (PA).

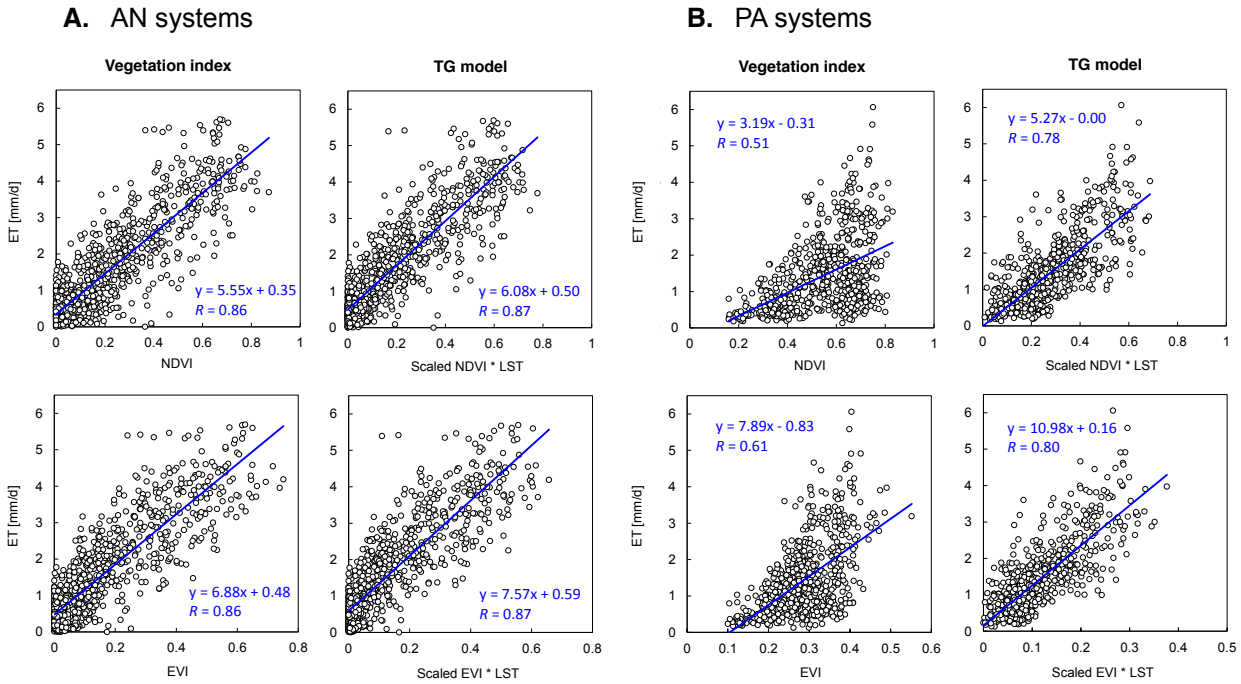
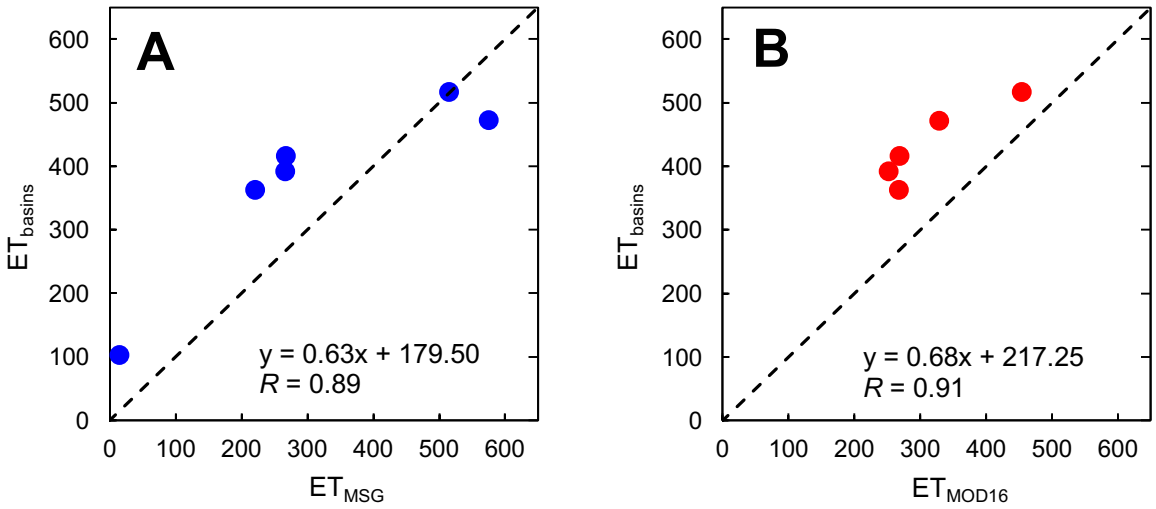


Figure S7. Scatter plot of the mean annual ET calculated from water balances against ET retrieved from (**A**) MSG and (**B**) MODIS ET products, at six water catchments along the EM north – south rainfall gradient. There were no ET values from MODIS for the area of Mamashit catchment.



Reference

Sims, D. A., Rahman, A. F., Cordova, V. D., El-Masri, B. Z., Baldocchi, D. D., Bolstad, P. V., Flanagan, L. B., Goldstein, A. H., Hollinger, D. Y., Misson, L., Monson, R. K., Oechel, W. C., Schmid, H. P., Wofsy, S. C. and Xu, L.: A new model of gross primary productivity for North American ecosystems based solely on the enhanced vegetation index and land surface temperature from MODIS, Remote Sensing of Environment, 112(4), 1633–1646, doi:10.1016/j.rse.2007.08.004, 2008.