



A case study on estimation of ET at Barrax, Spain with intercomparison of methods

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In semi-arid regions, estimates of crop water demand and water stress are critical issues for irrigation schedule. In this context, DEMETER project focuses on the improvement of operational tools that provide continuous monitoring of crop phenology and estimates of crop water status. Two methods were examined to map the crop water demand of irrigated fields. These are: the named “Kc-NDVI” and the “Kc-analytical” approach. Also in DEMETER project, advanced products as actual evapotranspiration were deliberated for stating the crop water stress. In particular, the Multi Scale Surface Energy Balance System, MSSEBS, and the Mapping Evapotranspiration at High Resolution and with Internalized Calibration, METRICTM, procedure were used. The four mentioned methods were applied for an agricultural area of Castilla-La Mancha (Spain), near Barrax pilot zone.

In this work, we analyze and discuss the potential of the approaches here proposed for routinely and operational estimations of water demand and water consumption at daily scale.