

*A concept for crop
evapotranspiration estimation
with remote sensing*



PRACTICE ABSTRACT

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The water balance modelling of agricultural sites and catchments, the enhanced use of drainage water for irrigation, and the fast, real-time monitoring of drought and inland excess water are essential for a better understanding of the soil–water–plant nexus and the ensuing improvement of irrigation scheduling practices.

Remote sensing techniques in improving crop yield and monitoring support the farming community in preparation for future climate change scenarios.

Moreover, quantitative hydrogeological modelling, various RS data, vegetation indices and modelling activities have also been assessed for the purpose of irrigation scheduling, however, their efficiency in estimating evapotranspiration needs further testing.

A model concept for crop evapotranspiration estimation was developed based on vegetation indices calculated from satellite imagery. Several combinations of sensors and remote sensing products were tested to use in crop evapotranspiration modelling potentially. Remote sensing-based analysis of crop evapotranspiration, combined with physically-based modelling, appears to be a promising method in water balance modelling of maize fields.



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