

Accuracy assessment of different remote sensing algorithms for the estimation of actual evapotranspiration

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Abstract

Estimating the actual evapotranspiration from the agricultural fields is important: a correct estimation helps us in scheduling the irrigation or estimating the yield. Though the actual evapotranspiration for a few locations can be estimated using the synoptic data, it is only the use of remote sensing that can help us estimate it in regional scale. This has led to the development of a plethora of remote sensing algorithms to estimate it and different approaches have been used to assess their performance. However, in most of the cases performance assessment has been based upon indirect measurement of the energy fluxes. Because the indirect measurements are estimates in themselves, comparing the results obtained from the remote sensing algorithms with those obtained from the indirect measurements can only give relative accuracy of the remote sensing algorithms. In this study, we are trying to assess the accuracy of a few remote sensing algorithms using the direct measurement of all the fluxes concerned under controlled environment. Though the small area over which the assessment is being carried out will not allow the results to be generalized over all the different climactic situations, they will be better assessment for the areas similar to our test area.