Implementation of a new method for demand driven irrigation

This method 4 does not use the critical suction values ψ_{start} and ψ_{stop} but rather the relative evapotranspiration as ratio of actual and potential evapotranspiration (ETR/ETP with ETR and ETP including both evaporation from bare soil and transpiration from the vegetation). The irrigation table in the control file has been extended by the **e_rp** parameter, which is the critical ETR/ETP value.

Internally, the soil moisture content which is the irrigation target is taken from the *HreduDry* parameter of each land-use type (for multi-layer landuse, only the first land use is regarded here). However, ETR/ETP is estimated within the [unsatzon_model] as an integral value for all vegetation layers (taking into account the evaporation from bare soil). The value of ETR/ETP may range from 0 to 1.

When running the irrigation model, this value is checked against a given **e_rp** threshold. If ETR/ETP is below **e_rp**, the required amount of irrigation is calculated and applied as usual, with possible limitations by stream flow or reservoir content.