Evaporation Estimation in the HHFS Hydrological Forecasting Model

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The operational model of the Hungarian Hydrological Forecasting Service (HHFS) is a conceptual, partly physically based model serving for flow forecasting for medium and large drainage basins [1]. It is a complex tool containing rainfall-runoff, flood routing modules extended with empirical backwater effect module and statistical error correction (Fig.1).

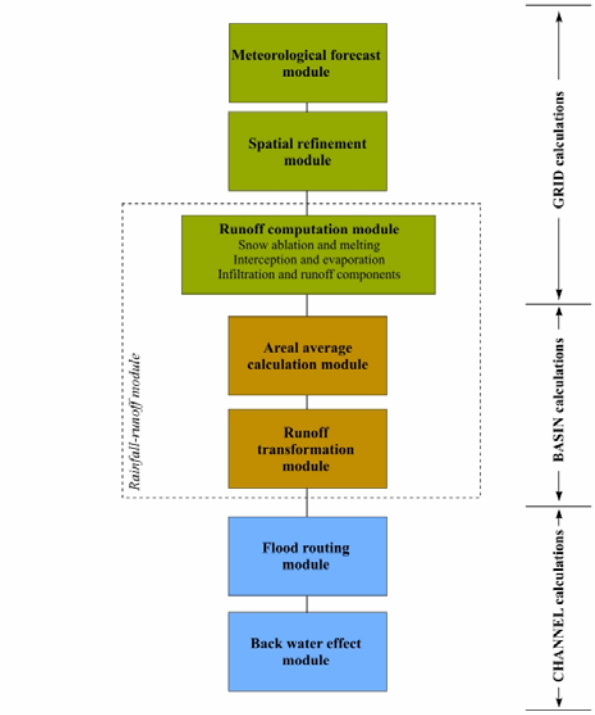

Figure 1 The structure of the HHFS hydrological forecasting modelling system.

As a part of the continuous updating and developing of the HHFS model, focus is put on the improvement of evaporation calculations by the application of Morton's CRAE model [2]. This model is based on the assumption that the areal and potential evaporation are in a complementary relationship. It is an effective method able to define areal evaporation based only on standard meteorological measurements. Another advantage of this technique is that it is universally calibrated and thus doesn't require any additional optimalization.

[1] B. Gauzer, P. Bartha, *Vízügyi Közlemények* **2001**, *4*, 512-537. (in Hungarian)
[2] F. I. Morton, *J. Hydrol.* **1983**, *66*, 1-76.