

Approaches to developing a distributed hydrological model

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Abstract The popular ways of developing distributed hydrological models are summarized. The connotation of “physically-based” is construed in a new and comprehensive way. The existing problems and future of distributed physically-based models and distributed conceptual models are discussed. Finally, two new promising ways of building distributed hydrological models are discussed. One is a physically-based incompact structure distributed hydrological model that integrates the advantages of the above two kinds of models; another is a deterministic-stochastic coupled distributed hydrological model.

Key words distributed hydrological model; distributed physically-based hydrological model; deterministic-stochastic coupled distributed hydrological model
