

Assessing parameters of physically-based models for poorly gauged basins

LEV KUCHMENT & ALEXANDER GELFAN

Water Problems Institute of Russian Academy of Sciences, 119991 Gubkin 3, Moscow, Russia
hydrowpi@aqua.lasert.ru

Abstract The possibility of using *a priori* information to reduce the amount of hydrological observation series data needed for the calibration of physically-based models of runoff generation has been studied. It is shown that by using measurements and runoff generation models in proxy-basins, the number of parameters requiring calibration can be limited to two or three. Investigations were carried out using a physically-based model of runoff generation in the Kolyma and Seim river basins, Russia. The possibility of using observations from water-balance stations and experimental catchments as *a priori* data for assigning parameters of the models is demonstrated.

Key words ungauged basin; physically-based model; parameters; proxy-basin