

# Towards revised physically based parameter estimation methods for the Pitman monthly rainfall-runoff model

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## **Abstract**

This paper presents a preliminary stage in the development of an alternative parameterisation procedure for the Pitman monthly rainfall runoff model which enjoys popular use in water resource assessment in Southern Africa. The estimation procedures are based on the premise that it is possible to use physical basin properties directly in the quantification of the soil moisture accounting, runoff, and recharge and infiltration parameters. The results for selected basins show that the revised parameters are at least as good as current regionalised sets or give satisfactory results in areas where no regionalised parameters exist.

**Keywords:** hydrological modelling, Southern Africa, parameters, regionalisation, uncertainty