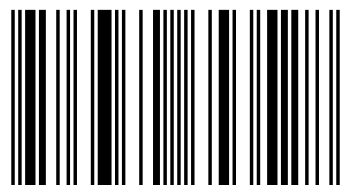


Integrated Modelling for Optimal Reservoir Operation for Irrigation

The present study develops a model for reservoir operation for irrigation of multiple crops toward this goal and demonstrates its applicability through a case study of an existing reservoir system in Karnataka state, India. Chapter 1 gives an introduction to the problem and the objectives of the study. Chapter 2 gives a brief review of the relevant literature. The framework of the proposed reservoir operation model and its salient features are presented in Chapter 3. Chapter 4 deals with the formulation of the intraseasonal allocation (LP) model in detail. The seasonal allocation (SDP) model formulation with the recursive function and the seasonal transitions are detailed in Chapter 5. Chapter 6 presents the disaggregation model used for the present study. Model application to the case study including forecasting of seasonal inflow and rainfall and a demonstration of the application of the steady state optimal operating policy for real time operation are discussed in Chapter 7. Chapter 8 gives the principal conclusions drawn from the present study.



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