

RUNOFF MODEL FOR SMALL IRRIGATION TANKS

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This paper presents a statistical model for catchment runoff into village irrigation tanks on the basis of rainfall and catchment land use. Several village irrigation tanks in the Dry Zone in Sri Lanka were used for this study. An empirical evaluation of the experimental data revealed two simultaneous equations: one on the runoff with rainfall and the other on the parameters of the former with land use pattern. Both equations gave a good fit to the experimental data with strong correlations ($r^2=0.98$) yielding a simple runoff model of practical use. This work is a part of our current programme in the runoff modelling on village irrigation tanks in the Dry Zone in collaboration with the irrigation Management Division of the Land and Land Development Ministry.