Abstract

In this paper the use of a Matalas model for synthetic hydrologic series generation is presented. Such model uses streamflow historical series but it also considers the expected value of an exogenous variable to estimate statistical means. This variable is the Sea Surface Temperature at the Niño 3.4 región (SST) which is statistically and physically related to monthly streamflows. As an example, the development of the model using the Matlab and @Risk tools for three specific rivers of the Colombian hydropower system is presented for a long term forecasting horizon, using the NOAA’s SST medium term forecast. The implementation of such model was made using the Matlab and @Risk for Excel tools.

Keywords

Hydrological Series Generation, Thomas & Fiering Model, Matalas Model, SST.