

Abstract:

Water, being a vital natural resource and making the object of many uses, involves a planning of its management from different angles and over different horizons. This management is due to become more and more complex and complicated in the future, because of demographic growth and improvement of the standard of living.

This work, devoted to the management of Koudiet Acerdoune dam using a stochastic dynamic programming, has implemented a calculation code « MODMAN », developed in Scilab.

Two objectives were chosen: the first one consists in meeting the demand of the different sectors by prioritizing drinking, industrial and irrigation water supply respectively, and the second one in guarantying a safety volume for the dry year that follows the study year.

The model is tested over different periods: dry, average, humid and reconstructed cumulative flows through the PCA.

Keywords: Dam; SDP; Management; Drought; Model; Koudiet Acerdoune.