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Socio-Economic Determinant of Mirani Dam Command Area (Balochistan, Pakistan): A Stochastic Approach

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Abstract—The present research aims to explore the socio-economic determinant of Mirani dam, a command area in Kech district Balochistan. A descriptive type of research survey is used. The present research describes a modelling and forecasting time series data regarding the socio-economic enhancement, dimensions, and livelihood options in purposive district it means Kech district, Balochistan. While the Box-Jenkins (ARIMA) model is used for estimating the predicting aspect. A target population of one hundred (100) intended beneficiaries were selected by using the multistage sampling procedure. SPSS version 22.0 used for the data analysis. The results show that (51%) of intended beneficiaries were un-educated. 45% of the intended beneficiaries were between age category of 32 to 45 year. The auto-correlations are large around lags three and fifteen. The auto-correlations in ARIMA analysis seemed to somewhat persistent auto-correlations. The partial auto-correlations are large around lags one and nine. Therefore, it was concluded that ARIMA (10, 0, 0) is fit to present the data. The non-significance variations between the groups were found about diverse lags. Through the present research, it is concluded that the dam construction has an everlasting impact regarding the socio-economic acceleration. In this regard, the government should introduce Water Management Simulation (WMS) model in order to promote sustainable ground water management.

***Keywords*— Balochistan, dam, determinant, kech, mirani, Pakistan socio-economic, stochastic approach**