

Modelling Water Consumption in Kalmunai using Time Series Models

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Abstract

Water is considered as lifeline of all living things specially humans. After the tsunami well water is damaged in coastal area of Sri Lanka. The drinking water production and distribution in Kalmunai area is a challenging problem. This study aims to analysis and identify the best fit time series model to the water consumption in the Kalmunai using time series techniques. For this purpose the water consumption data (2005 to 2014) were collected on monthly basis from the National Water Supply and Drainage board. Several time series models including AR, MA and ARMA were developed to the water consumption data, and it emerged that the most adequate models for the data was ARMA (1, 2). The error series of the fitted model was found to be a white noise process.

Key words: ARMA, Drainage board, Tsunami, Water consumption