

CHAPTER 3

METHODOLOGY

Research Design

The study, which is about the rainfall patterns of Baguio, involves quantitative research on the rainfall amounts of Baguio. A statistical analysis shall be done on the gathered data, particularly a Time Series Analysis. The Holt-Winters Method will be applied to the time series data from January 2001 to December 2011 to make determine the coefficients of the mathematical model for forecasting values from January 2012 to December 2012 which were retrieved from PAG-ASA. Auto-correlation function, Ljung-Box test, and test for normality were used to test for the validity of the model.

Sources of Data

The data were the rainfall amounts per month in Baguio City. The sample, which will be taken from the population, were the rainfall amounts ranging from January 2000 to December 2011. Rainfall amount was measured using either a tipping bucket or rain gauge. It is measured and recorded in millimeters every three hours starting from 2a.m. to 11p.m.. The data was gathered from the weather station of PAGASA located in Baguio City.

Locale of the Study

There have been a series of occurrences of unforeseen flashfloods and landslides in Baguio City, especially in areas such as City Camp Lagoon, so the researchers chose that the study should be done in Baguio City.

Population/Sampling

The study involved the analysis of rainfall amounts gathered daily by PAGASA. The research would only take into consideration the data gathered from January 2000 to