To Set up the Spatial Surveillance System of Communicable Disease by GIS

Abstract

The paper’s title of major research’s outcome was “Association study of meteorologic data and dengue vector larvae density figure”. The study to be inquiring into the relationship of the meteorologic data and the dengue fever vector mosquito larval density figuer, to take expecting to make use of cover district extensively and obtaining to compare as fast convenience of the meteorologic data for predicting mosquito larval density figuer everywhere in the future. We chose the data of larval density figier and meteorology from Bei District in Tainan City, Yungkang City in Tainan County and Cianjhen District in Kaohsiung City, three administrative areas of southern Taiwan to couple together for multiple regression model analyses. No matter analysing with the day’s or single week’s meteorology data, all meteorologic factors had statistic significance in every regression model including single meteorology factor. The results showed that the air pressure, temperature, relative humidity and rainfall are the important variables that constructing the predict model of the larval density figure. The multiple regression model including the average of everyday’s air pressure and relative humidity, accumulation of everyday’s rainfall, district and survey year had best explain power. ($R2=0.2902$, p-value<0.01)。