ABSTRACT

Disease is a problem that is often faced by people. Increase of disease patients or appearing of disease kinds that was unknown is a challenge of which is faced by people and government especially Health Department. Dengue fever is a disease case that often attacks regions in Indonesia especially Bandung City. Increase of Dengue fever victims often occures year after year, even it can cause extraordinary condition in certain region. Chikungunya fever is a disease that is related with Dengue fever, because these diseases have a same disease vector that is *Aedes Aegypti* mosquito. Health Department needs appropriate consideration to take action in solving disease problem in a region. Surveying to victim location will take long time to determine disease handling action. Whereas disease handling action should be done to prevent disease spreading. So, it needs a tool that can help analyzing disease condition in a region based on attribute and spatial supported data.

Geographic Information System is a tool that can be used to help analyzing disease condition of region to determine action that is should be done in solving disease problem. Besides, GIS can give out information in a thematic map visualization form so it can make user to understand the information given more easily. To analyze disease condition of area, there are several datas that are needed, namely: disease victim data, number of free larva in location, and geographical data as district, subdistrict etcetera. This Geographic Information System needs software as MapInfo Professional 7.5, Visual Basic 6.0, MS.Access 2000, dan Windows XP Professional. And user of the system is Health Department in surveillance part.

Geographic Information System that is designed can analyze disease condition of area and show the action that is needed in handle of Dengue fever and system can analyze region that tends to extraordinary condition of Dengue fever. And this system also can analyze crisis level region of Chikungunya fever based on victim data and number of free larva in location.

Therefore this information system can be used as helping tools to support epidemiology surveillance of Dengue fever and to monitor condition of Chikungunya fever in regions to solving disease problem in each areas . But in determinig final decision, it needs matured considerations based on Health Department policies.

Key words : GIS, Dengue Fever, Chikungunya Fever, Extraordinary Condition, Handling Action