CHAPTER VII
SUMMARY AND SUGGESTION

This chapter will explain the overall conclusions of the research that has been done, which is closely related to the research objectives and the issues raised in this study. In this chapter there will also be some suggestions related to this research.

7.1 Summary

Based on research that has been conducted, some conclusions can be drawn as follows:

1. There are three models used in predicting dengue fever cases, mosquito simulation (oviposition and pre adult mosquito maturation rate), simulation of infected population, and simulation of death cases caused by dengue fever. The variable used in mosquito simulation is temperature. The variables used in infected population simulation are oviposition rate of the egg (per days), proportion vertical infection rate, infected probability, pre adult mosquito maturation rate (per days), and infected population. The variable used in death cases are oviposition rate of the egg (per days), proportion vertical infection rate, infected probability, pre adult mosquito maturation rate (per days), infected population, and recovery rate.

2. Dynamics transmission vector model used in this research to predict and simulate mosquito simulation, infected population and death population in dengue fever. In mosquito simulation and infected population the deviation between simulation and real condition is small. The MAD (Mean Average Deviation) for infected population is 0.519. In death cases simulation the result is less precision with real condition and the MAD score is 1.229. So, in death cases model need improve by adding some variables that influence to dengue fever death cases.
3. Severity level of dengue fever categorize in three condition, namely dangerous, warning, and safe condition. Dangerous condition occurs when one person died and seven people infected of dengue fever virus. Warning condition occurs when six until three people infected of dengue fever virus. Safe condition occurs when maximum two people infected of dengue fever epidemics.

4. Sharing knowledge help entities in system understand the step to prevent dengue fever epidemics. Sharing knowledge aimed for Health Department, Clinics, and Society. It can help the entities understand the effective and efficient way in preventing dengue fever epidemics.

5. The mechanism of dengue fever mechanism is divided into two kinds of action in mechanism of spread and prediction system. It is coordinative action and socialize and prevention action. The action will perform after the entities of system know about the condition and severity level of dengue fever epidemics in the sub district from spread and prediction system of dengue fever website based. The coordinative action is conducted from Health Department to Clinics and head of RT/RW in sub district. The clinics also can make coordinative action in Health Department and head of RT/RW. Society also have coordinative action to head of RT/RW to give report about dengue fever infected cases. Based on the prediction result in spread and prediction system in dengue fever epidemics the health department can socialize to clinics, head of RT/RW, and society about the way to prevent dengue fever epidemics. The clinics also can precede the command from Health Department to head of RT/RW and society.

7.2 Suggestion

This sub chapter will explain about some suggestions and recommendations in this research:

1. The model in this study is limited in temperature as input variable in spread of dengue fever. So, it is important to consider social factor,
1. Environmental factor, and people’s behaviour in model in order to capture the real condition of dengue fever epidemics.

2. Requires advanced studies related to the effective website design and website content to appropriate it with cognitive principles.

3. Lack of data and information about dengue fever cases in Surabaya, so it is needed more accurate and integralic data.

4. Model of dynamics transmission vector is needed trial to assist the precision model for infected and death population in dengue fever.
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