

## CHAPTER 5

### CONCLUSION AND RECOMMENDATION



#### 5.1 Conclusion

According to the results of environmental geology appraisal using GIS for sanitary landfill site selection in Changwat Chachoengsao. The conclusion can be drawn as below.

The sanitary landfill is the appropriate methodology for solid waste management in Changwat Chachoengsao. Some suitable areas for sanitary landfill can be recognized.

In the present study has focused on physical environment parameters, including land requirement, topography and landform, geology, water resources (surface water and groundwater), landuse, flood hazard, soil characteristics. The landfill design for sanitary landfill selection has been performed.

Land requirement for sanitary landfill which lifespan at least 20 years is an area of 630,575 m<sup>2</sup>.

Based on GIS analysis, there are 17 suitable areas for sanitary landfill in the study area.

The weight factors are assigned and directly expressed the relative important factor and then the higher number to other more important factors. For this study, the weight of 0.4, 0.4, 0.15, and 0.05 are given to distance from suitable areas to waste origin of Muang Chachoengsao (DSWMC), distance from suitable areas to waste origins of municipal/sanitary of Changwat Chachoengsao (DSWCC), land price, and area for an extension, respectively. Distance from suitable areas to waste origins of municipal/sanitary of Changwat Chachoengsao parameter is subdivided into 2 sub-parameters, namely, average of DSWCC, and standard deviation of DSWCC which their weight are 0.35, and 0.05, respectively.

From Weight-Rating Calculation, Ladkrathing 2 and Kuyaim 1 sites indicated the same highest score that was 4.35 points.

From soil profile description of Hole No.2 (Ladkrathing 1), Area Method is an appropriate operation for sanitary landfill because the groundwater level exists at depth about 2.00 meters from ground surface.

## 5.2 Recommendation

As the results of this study, some limitations that should be mentioned are such as the difference in map scale, the error caused by the data entering process, as well as the uncoverage of some concerned data. It is noted that almost all data and information obtained from different government agencies are not of compatible and consistency. Consequently, a certain degree of adjustment is essentially required. In addition, the application of GIS should be update database for obtaining the accurate information output.

100 years of flood returned period should be considered for suitable areas selection.

Moreover, the emphasis of the present investigation should be laid upon developing the appropriate methodology to transfer the environmental geological data of related information for the planner, particularly decision maker.

Finally, the "Polluter Pay Principle" is an important practice to improve the habit of polluter (Kerdput, 1999). The polluter should pay the money for the package. Any package more affected to environment than, they should more pay than. Consequently, it will reduce the pollution from waste.