## **CHAPTER V**

## CONCLUSION AND RECOMMENDATION

## Conclusion

- 1. This study used remote sensing technique as a tool for land use change detection at Ko Samui / Surat-thani. Remote sensing technique has shown to be useful for land use change detection. Because it can provide reasonable classification accuracy (in this case is 73-78%) and save time. Furthermore, the data are recorded in digital form which are appropriate for computer analysis. Remotely sensed data selection depends on the appropriation of satellite data resolution and the size of ground cover area.
- 2. Patterns of land used change has been found to be influent by tourism impact. Tourism development generates the urbanization in beach nearby area. The urbanization has been expanded very rapidly during the past seven years (1988-1994). The tourism area increased from 14.22, 38.93 and 41.65 square kilometers in 1988, 1993 and 1994 respectively. The expansion of urban area for tourism usually encroach public area, forest and natural beach area. The encroachment effected on the decline of public area and their ecosystem. Moreover, another types of land cover have declining trend. The increasing and decreasing of land cover types are by product from tourism development.
- 3. Tourism impact evaluation in this study used geographic information system (GIS) and multicriteria evaluation technique as a potential site selection tool. GIS and multicriteria technique are the appropriate tool for tourism site selection, because its capacity of data storage and retrieval (database), data manipulation, and data displaying yields. GIS can analyze both spatial data and attribute data. This technique can identify a suitable area by considering physical and environmental factors and legal status of the study area. Furthermore, the output of remote sensing is a good input for GIS analysis. The GIS output can display in cartographic map that support the decision-making.

4. The potential area is the area that suitable for tourism development. Comparing the suitable area and exactly tourism area showed the development that exceeded the potential area. Results of the study revealed that tourism development in Ko Samui was greater than appropriate area. There are many impacts from tourism. The major impact are land use change and environmental depletion. These problems might cause declining of tourism in Ko Samui.

## Recommendation

- 1. For management purpose, Ko Samui has both carrying capacity study and tourism development master plan for policy and criteria of development. But implementation of the plan unsuccessful in reality, therefore the island has encountered many problem. If we want Ko Samui to be still the island of paradise, then a total development control is required. Tourism and healthy environment can co-exist if there are proper knowledge and a good management. Ecotourism is an alternative, and care for sustainable of resources and environment. By the reason of travel has become a basic human need so tourism has been still.
- 2. For future study, remote sensing and GIS technique will be used, satellite data resolution are important for accuracy and further analysis. In this study, data used is TM image that has a  $30 \times 30$  meters resolution. This resolution sometimes too coarse for urban study. The small area might be used SPOT satellite image, which has a  $10 \times 10$  meters resolution. Satellite data selection depends on the data available and the appropriate between satellite image resolution and ground cover size.
- 3. There are many methods to determine potential site though a GIS with multicriteria evaluation technique has been adopted this study. However, further study concerning relative factors and vary factors weighting for the best weight that could provide a better result. The main problem in this kind of this study is the lack of relevant data, particularly ecological basic data. Further, socio-economic data are not include in this study.

The remark concerns the need for a specific training required for the best use of GIS and its adequate use in the field of ecological and socio-economic studies and their applications to future study purpose.

On the other hand, GIS application should be concern on error both data source and human error, and error propagation. These error can indicate the significance level of GIS output.

