V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Several conclusions can be drawn from this research as the following:

1. The method was developed by combining raster datasets from LST, NDWI and supervised classification analysis and vector datasets from constricted factors to map suitable area for paddy field in swamps area of interest. This methodology was formulated under the assumption that swamps is one of the wetland forms that included in the non-forested peat lands and a lowland region saturated with water not open water features itself.

According to the accuracy assessment results, this method is still in moderate level. It is possibly caused by misclassification in supervised classification. For image acquisition on 15 April 2000 image an accuracy of 73.5% was obtained with LST value range 23°C-33°C and NDWI value range of -0.35 – 0.1. For image acquisition on 16 May 2006, an accuracy of 63.5% was obtained with LST value range 23°C-33°C and NDWI value range of -0.43 - 0. It indicates that swamps identification method with using Landsat imagery is still feasible for rapid determination of swamps area over a large area.

3. Suitability classes for swamps area at the area of interest show that most of the swamps area in area of interest in highly suitable for paddy field. It can be shown in percentage area for highly suitable is 54%, moderately suitable is 40.2% and marginally suitable is 5.8%. It indicates that the swamps area in Banyuasin Regency with the area around 349,993 ha can be developed as the supporting area for paddy field extensification program.

5.2 Recommendations

Recommendations as the result of this research are as follows:

This method can be applied as an alternative method in determining alternative area for wetland to support the agricultural development.

Referring to the limitation of the method, for improving of the accuracy, it is suggested to use some other thresholds value range more detail in order to get...
the more variety of result possibility. The accuracy assessment is suggested to do in each step by using more detail of ground truth data.