V. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The drought potential from 2003 to 2005 at Karawang district is low either in the wet season or dry season. For rainy season data is taken in April and for dry season from June to October. The dominant drought indicated is 0.5-0.8, especially in paddy field areas. Based on drought indicators at Karawang district water is supplied by rainfall and irrigation available during dry or rainy season. In October 2006, the drought level is moderate until very dry as indicated by evaporative fraction which is about 0-0.4. In September 2006, all irrigated areas in Karawang already harvested their crop so many paddy field areas are bare and intentionally let dry waiting for the next planting session. October is usually the start of the rainy season, but in October 2006 there was no rainfall observed. Hence, wider drought vulnerability was detected.

This research studied the implementation of a web-base GIS drought indicator at Karawang district using MapServer, available software, which was extended using MySQL database, PHP Script and MapScript to provide data and map services. This system has provided some good experience for understanding the system application and gives a confidence to implement the knowledge and skill derived from learning process.

5.2 Recommendation

To improve capability drought detection using energy balance need to develop local-based physical equations for future application and need to have information on planting season of the Karawang area. To improve the capability of the web-based GIS drought indicator, not only to display and to query the spatial data of drought areas, there is a need to develop more web-based GIS tools to share datasets and information.