ABSTRACT

ANINDA WISAKSANTI RUDIASTUTI. Land Suitability Evaluation and Shrimp Culture Information System Development of PT. Indonusa Yudha Perwita. Supervised by JONSON LUMBAN GAOL AND EDDY SUPRIYONO.

Utilization of GIS excess in land suitability analysis and Shrimp Culture Information System development of PT. Indonusa Yudha Perwita (PT. IYP) are based on the absence of land suitability information and the lack of computerized data management. The study is designed to evaluate land suitability of PT. IYP’s ponds, to develop information system for aquaculture data management, and to analyze relation of land suitability of ponds and aquaculture operational success. The analysis of land suitability is performed by using multicriteria biophysical, and constraint factors like legislation to protect mangroves as buffer zone along coastline. Information system is built through requirement analysis stages, system design, and system development. The result of land suitability analysis is that 11.13 ha ponds area of PT. IYP located in moderately suitable class, and the rest 11.71 ha is very suitable. Due to government regulation in Keppres no. 32/1990, the moderately suitable area is designated as coastal greenbelt of mangrove. Shrimp Culture Information System of PT. IYP is able to provide efficiency, especially in time and data storage. Its capability in data processing, including, spatial comparison, temporal variation, and algebra application (FCR, SR, ADG, etc.), provides efficiency in evaluating shrimp culture activities. Lower yield from ponds locating on moderately suitable area than that from ponds in very suitable land is revealed as relation land suitability of PT. IYP to its production value.

Keywords: GIS, Land Suitability, Shrimp Culture Information System