Determining the right land for fish farming is very influential in achieving optimal land productivity to reduce the impact of time and financial losses. This thesis study aims to develop a Geographic Information System for the Selection of Freshwater Fish Farming Land Using the Logic Scoring of Preference (LSP) Method. Analysis of land suitability data using the LSP method, the results as a material for decision making in land selection. LSP method has a consistency with properties that can be observed from consideration of human evaluation. The results of this study are in the form of a system that can be used for the selection of fish cultivation land based on the LSP method and visualized in the Geographic Information System (GIS). The results of the calculation of land suitability of thirty-six alternative land in the case study in Kerinci Regency, then obtained alternative land that has a high level of suitability Pendung Mudik the suitability value of 0.96 is the best alternative based on LSP calculation results. Validation of LSP calculation and expert assessment is 80.55%.
1. Montgomery, B., Suzana D. 2016. Comparison of GIS-Based Logic Scoring of Preference and Multicriteria Evaluation Methods: Urban Land Use Suitability. Geographical analysis. 48(4), 427-447.

2. Li, H., Aide T. M., Ma, Y., Liu W., dan Cao, M. 2016. Demand for rubber is causing the loss of high diversity rain forest in SW China, Biodiversity and Conservation, 16(6), 1731-1745.

3. Hossain, M.S., Das, N.G. 2010. GIS-based multi-criteria evaluation to land suitability modelling for giant prawn (Macrobrachium rosenbergii) farming in Companigonj Upazila of Noakhali, Bangladesh. Comput. Electron. Agric. 70 (1), 172–186.

4. Kiavarz, Majid., Mohammadreza J. N., 2017, Geothermal prospectivity mapping using GIS-based Ordered Weighted Averaging approach: A case study in Japan’s Akita and Iwate provinces. Geothermics. 70, 295-304.

5. Rebolledo, B., Antonia G, Xavier F, Jos E. 2016. Assessment of groundwater vulnerability to nitrates from agricultural sources using a GIS-compatible logic multicriteria model. Journal of Environmental management. 172, 70-80.

6. Dragicevi, S., Hatch, H. 2018. Urban Geosimulations with the Logic Scoring of Preference method for agent-based decision-making. Habitat International, 72, 3-17.

7. Vatsavai, R., S. Shekhar, T. E. Burk, Lime, S. 2014. Mapserver : A high performance, interoperable, and open source web mapping and geo-spatial analysis system, Geographic Information Science. 400-4017.

8. Sample, J. E., Baber, I., Badger, R. 2016. A spatially distributed risk screening tool to assess climate and land use change impacts on water-related ecosystem services, Enviromental Modelling & Software. 83, 12-26.

9. Dujmovic´, J.J., Tré, G.De., Van de Weghe, N. 2008. Suitability maps based on the LSP method. Model. Decis. Artif. Intell. 15–25.

10. Dujmovic´, J., De Tré, G., Dragic´evic´, S. 2009. Comparison of multicriteria methods for land-use suitability assessment. In: 2009 IFSA World Congress/EUSFLAT Conference. 1404–1409.

Index Terms

Computer Science
Information Systems

Keywords

Logic Scoring of Preference (LSP), Fish Cultivation, Geographic Information System.