

WEB-BASED APPLICATION FOR HOUSING SUITABILITY IDENTIFICATION

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Abstract

Urban development and migration of population from rural to urban areas are global phenomenon. This rapid growth of urban population increases the risk of people living in area especially if there is no prior land suitability analysis conducted. The non-existence of a centralized system that generates and analyzed geospatial data leads to a difficult way of identifying suitability. In this study, it illustrates a way of integrating Open-Source Geographical Information System (GIS) and Leaflet Application Programming Interface (API) technology for developing an automated system in Housing Suitability Identification in Butuan City. This application is an aid in land selection on building a house. Geospatial data and relevant information such as flood prone area, fault line, built-up areas, and proximity distance from road were combined to create a summarized data of suitability map. In analyzing the different factors affecting the suitability identification, ArcMap was used. GIS-based MCA (Multi-Criteria Analysis) was then used to generate the result map. The Graphical User Interface (GUI) of the web-based system was created and programmed in HTML, CSS, and JavaScript Language.

Keywords: Open-Source GIS, Leaflet Application Programming Interface