

***Geographic Information System of Dengue Hemorrhagic Fever (DHF) Spread
in Probolinggo Regency***

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ABSTRACT

Dengue fever, commonly known as DHF, is one of the acute viral infectious diseases caused by the dengue virus and transmitted by the Aedes aegypti mosquito. Based on the East Java Health Profile, it was found that over the past three years, Probolinggo Regency is a Regency/City that has experienced a significant increase in cases and deaths compared to other regencies/cities in East Java due to DHF. This is indicated by a spike in cases in 2024 of 2816 cases and 26 deaths due to DHF. When viewed from the Incident Rate, Case Fatality Rate, and Larvae Free Rate, they have not met the target of the Indonesian Ministry of Health, so it is necessary to increase public awareness as an initial step to prevent a spike in dengue fever cases in the following year. This study aims to create a digital map, and its distribution is divided into three groups: high, medium, and low. This type of research is research and development, which uses waterfall system design and Quantum GIS application, which functions to create maps and MySQL as a database. In addition, application testing uses black box testing and the SUS (System Usability Scale) method. The results of this study are a geographic information system that can display a website-based map of the distribution of dengue fever based on vulnerability zones, graphs, and report tables that the admin easily updates. This system is expected to help officers promote integrated health programs according to their area's severity and educate the community to prevent and be aware of the spread of dengue fever in Probolinggo Regency.

Keywords: *Dengue Fever, Geographic Information System, Website*