

Sistem Pemetaan Lokasi Penanggulangan Dan Pencegahan Penyakit Demam Berdarah Dengue Dengan Metode *K-means* Clustering (Studi Kasus Di Puskesmas Binakal)

Location Mapping System for Dengue Hemorrhagic Fever Management and Prevention Using K-means Clustering Method (Case Study at Binakal Health Center)

Pembimbing (1 orang)

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ABSTRACT

Dengue Hemorrhagic Fever is a disease caused by the dengue virus which is transmitted through the bite of the Aedes aegypti mosquito. Dengue Hemorrhagic Fever (DHF) is a type of widespread disease that can cause outbreaks and can cause death. So that prevention and treatment are needed quickly and on target in areas with high dengue fever. The purpose of this study was to create a geographic information system for the distribution of DHF in Binakal District using the K-means Clustering method. The stages of the research method include literature study, data collection, data analysis, system design, system implementation, system testing, and discussion. There are 2 variables used, namely the number of DHF sufferers and the number of DHF deaths in each village in Binakal District. The data variables are then grouped into 3 categories based on the level of vulnerability which includes endemic areas, potential areas, and free areas. The results of the grouping are then visualized in the form of a map, endemic areas are marked in red, potential areas are marked in yellow and free areas are marked in red. The system has been tested with User Acceptance Testing (UAT), black-box testing, and

accuracy testing by comparing the results of system calculations and manual calculations of K-means Clustering obtained 87.5%, so it can be concluded that the system can cluster data correctly but there are still some clustered data in other groups.

Keywords: *Dengue Hemorrhagic Fever (DHF), Clustering System, Geographic Information System, K – Means Clustering*