

## ABSTRACT

*Dengue Haemorrhagic Fever (DHF) is an endemic disease that is a major health problem in Indonesia. This study aims to optimize clusters in identifying factors that influence the number of DHF cases by district/city in West Java Province in 2022 using the Clusterwise Linear Regression (CLR) method. CLR is a method of grouping data into several clusters based on the characteristics of regression parameters. Model parameter estimation was performed using the maximum likelihood method and the best model optimization was performed with the minimum Akaike Information Criterion (AIC) to determine the optimal number of clusters. The results stated that the best model consisted of three clusters. Cluster 1 consists of 11 districts/cities influenced by the factors of population growth rate, number of hospitals, number of health centers; cluster 2 consists of 8 districts/cities influenced by the factors of population growth rate, number of hospitals, number of floods, number of health centers, percentage of proper sanitation; and cluster 3 consists of 8 districts/cities influenced by the factors of population growth rate, number of hospitals, number of floods, percentage of proper sanitation. The coefficient of determination in cluster 1 is 90.95736%; cluster 2 is 71.21607%; and cluster 3 is 91.40601%. This indicates that cluster optimization using CLR with AIC can improve the model's ability to explain data variance better.*

**Keywords:** *Akaike Information Criterion, Clusterwise Linear Regression, DHF, Cluster, West Java*