

**GOEGRAPHIC INFORMATION SYSTEM (GIS)
IMPLEMENTATION IN DRAINAGE INSPECTION
AND MAINTENANCE (Case Study : Jalan Antara,
Kecamatan Bengkalis)**

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ABSTRACT

The handling of the drainage system in the city of Bengkalis has not been implemented comprehensively. Reviewing the gotong-royong activities held by IKPTB (Ikatan Keluarga Persaudaraan Tionghua Bengkalis) on Ahmad Yani, Bengkalis City village, it can be seen that in urban areas there is a lot of garbage that accumulates, especially in closed drainage channels.

This research focuses on the application of Geographic Information Systems (GIS) in analyzing damage to road drainage channels. This study focused on Jalan Antara Kec. Bengkalis with a visual survey at the location and taking the coordinate points of the damage location.

The results of the study identified the functioning of the drainage channel on Jalan Antara with a road section length of 816 meters, falling into the category of minor damage with a percentage of the drainage channel of the left section of 59.90% and the right section of 47.83%. Included in the IKDP value of 4 with minor damage. drainage channel damage in two types: damage to paving blocks as many as (16 points) and damage to manhole covers as many as (33 points). The results obtained from the ArcGis application are a map of the distribution of damage.

Keyword : GIS , Inspection, IKDP, Road Drainage