

## INTISARI

### **ANALISIS KESESUAIAN LOKASI GUDANG PENYALUR LOGISTIK BENCANA ERUPSI GUNUNG API MENGUNAKAN SISTEM INFORMASI GEOGRAFIS DI KABUPATEN SLEMAN**

Penelitian ini bertujuan untuk melakukan analisis kesesuaian lokasi gudang penyalur logistik bencana. Hasil dapat memberikan informasi penentuan lokasi gudang penyalur logistik bencana dapat dikembangkan dan diaplikasikan dalam berbagai kondisi bencana erupsi Gunung Merapi di Kabupaten Sleman. Metode yang digunakan adalah observasi, wawancara, dan survei lapangan. Proses analisis menggunakan *Spatial Multi Criteria Analysis* (SMCA) dengan software ILWIS (*Integrated Land and Water Information System*), software pengolahan data Sistem Informasi Geografis (SIG) yang memiliki kemampuan untuk pengolahan citra (*Image Processing*) data penginderaan jauh. Hasil penelitian menggunakan metode SMCA pendekatan *location-allocation* dengan penyelesaian masalah *maximize capacitated coverage* adalah jarak total masing-masing lokasi gudang penyalur logistik bencana ke barak pengungsian yaitu, gudang Pakembinangun sebesar 52,924 km, gudang Umbul Martani 37,975 km, Gudang Mororejo 58,513 km. Jarak terjauh barak pengungsian dari gudang penyalur logistik bencana terpilih adalah sebesar 10,467 km antara Gudang Mororejo dengan Barak Girikerto. Jarak terdekat sebesar 222.56 meter antara Gudang Umbul Martani dengan Barak Umbul Martani. Lokasi optimal gudang penyalur logistik bencana di Kabupaten Sleman yang dapat direkomendasikan sebanyak 3 buah gudang. Masing-masing gudang terletak di Balai Desa Pakembinangun, Balai Desa Umbul Martani, dan Balai Desa Mororejo. Total jumlah pengungsi yang mampu dilayani sebanyak 10.670 yang tersebar di 34 barak pengungsian di Kabupaten Sleman.

Kata kunci : Logistik Kemanusiaan, SMCA, Location-Allocation, Gudang Logistik Bencana

## **ABSTRACT**

### **Location Suitability of Volcano Eruption Disaster Logistic Distribution Warehouse Using Geographic Information System in Sleman District**

This study aims to conduct an analysis of the suitability of the disaster logistics warehouse location. The results can provide information on the location of disaster logistics warehouse locations can be developed and applied in various conditions of the disaster eruption of Mount Merapi in Sleman Regency. The methods used are observation, interviews, and field surveys. The analysis process uses Spatial Multi Criteria Analysis (SMCA) with ILWIS software (Integrated Land and Water Information System), a Geographic Information System (GIS) data processing software that has the ability to image processing (Image Processing) of remote sensing data. The results of the study used the SMCA method location-allocation approach by solving the problem of maximizing capacitated coverage, the total distance of each disaster logistics warehouse location to the refugee barracks, namely, Pakembinangun warehouse at 52,924 km, Umbul Martani warehouse 37,975 km, Gudang Mororejo 58,513 km. The furthest distance from the refugee barracks from the selected disaster logistics distributor warehouse is 10.467 km meters between Gudang Mororejo and Barak Girikerto. The closest distance is 222.56 meters between Gudang Umbul Martani and Barbul Umbul Martani. The optimal location of the disaster logistics distribution warehouse in Sleman Regency can be recommended as many as 3 warehouses. Each warehouse is located in Pakembinangun Village Hall, Umbul Martani Village Hall, and Mororejo Village Hall. The total number of refugees able to be served is 10,670 spread in 34 refugee barracks in Sleman Regency.

**Keyword : Humanitarian Logistic, SMCA, Location-Allocation, Disaster Logistic Warehouse**