

INTISARI

Data BPBD Banjarnegara menunjukkan kejadian bencana alam di Banjarnegara mencapai 127 setiap tahunnya, hal ini menyebabkan Banjarnegara dijadikan sebagai maket bencana. Logistik berkaitan dengan bencana merupakan unsur yang paling penting dalam setiap upaya bantuan kemanusiaan dan pengelolaan logistik kemanusiaan. Berdasarkan hasil survei pendahuluan, di Banjarnegara belum ada lokasi yang tepat untuk *warehouse* yang dapat mendukung kelancaran distribusi logistik kemanusiaan sehingga perlu ditentukan lokasi *warehouse* yang optimal.

Penelitian ini menggunakan metode evaluasi kualitatif, analisis multi kriteria spasial, *analytic hierarchy process* (AHP) dengan perhitungan perbandingan berpasangan serta model alokasi lokasi. Pengolahan data dilaksanakan dengan bantuan software ArcGIS dan *Integrated Land and Water Information System* (ILWIS).

Hasil penelitian menunjukkan bahwa *warehouse* yang ada sekarang belum mencukupi secara kapasitas dan belum efektif secara pelayanan distribusi logistik kemanusiaan. Hasil pengolahan data didapatkan 12 lokasi potensial. Dari 12 lokasi tersebut didapatkan 3 lokasi optimal *warehouse* yang digunakan untuk melayani 278 desa, yaitu kantor BPBD di Kecamatan Banjarnegara yang melayani 131 desa dengan jumlah waktu pelayanan 50 jam 37 menit (3037 menit), Desa Pesantren di Kecamatan Wanayasa yang melayani 88 desa dengan jumlah waktu pelayanan 41 jam 37 menit (2497 menit) dan Desa Glempang di Kecamatan Mandiraja yang melayani 59 desa dengan jumlah waktu pelayanan 16 jam 15 menit (975 menit).

Kata Kunci : *Warehouse*, Logistik Kemanusiaan, Analisis Multi Kriteria Spasial, *Analytic Hierarchy Process*, Model Alokasi Lokasi

ABSTRACT

Data Banjarnegara BPBD shows the incidence of natural disasters in Banjarnegara reached 127 every year, this causes Banjarnegara serve as a disaster model. Disaster-related logistics is the most important element in any humanitarian relief and humanitarian logistics effort. Based on preliminary survey results, in Banjarnegara there is no suitable location for warehouses that can support the smooth distribution of humanitarian logistics so it is necessary to determine optimal warehouse location.

This research uses qualitative evaluation method, spatial multi criteria analysis, analytic hierarchy process (AHP) with paired comparison calculation and location allocation model. Data processing is done with the help of ArcGIS software and Integrated Land and Water Information System (ILWIS).

The results show that the existing warehouses are not sufficiently in capacity and not yet effective in the service of distribution of humanitarian logistics. The results of data processing obtained 12 potential locations. From the 12 locations, 3 optimal warehouse locations were used to serve 278 villages, there are BPBD office at Banjarnegara sub-district that serves 131 villages with service time of 50 hours and 37 minutes (3037 minutes), Pesantren Village at Wanayasa Sub-district that serves 88 villages with 41 hours and 37 minutes (2497 minutes) and Glempang Village at Mandiraja Sub-district that serves 59 villages with service time of 16 hours and 15 minutes (975 minutes).

Keywords : Warehouse, Humanitarian logistic, Spatial Multi Criteria Analysis, Analytic Hierarchy Process, Location Allocation Model.