

ABSTRAK

Badan Penanggulangan Bencana Daerah (BPBD) Kabupaten Karawang dibentuk berdasarkan Peraturan Bupati Kabupaten Karawang Nomor 70 tahun 2016, salah satu tugas nya yaitu mendistribusikan pasokan logistik pada korban bencana. pasokan logistik masih sering terlambat sampai ke lokasi bencana sedangkan dalam pendistribusian logistik harus cepat dan tepat sasaran. Untuk menangani permasalahan tersebut, dilakukan perbaikan yaitu dengan megusulkan pembuatan Standar Operasional Prosedur (SOP) penyaluran bantuan dan membuat usulan rancangan rute pendistribusian logistik. Standar Operasional Prosedur (SOP) dibuat peneliti termasuk ke Standar Operasional Prosedur (SOP) Administratif, untuk Standar Operasional Prosedur (SOP) yang dibuat oleh peneliti sebagai usulan ada 11 kegiatan yang dilaksanakan oleh petugas dan ada 6 pelaksana. Untuk rancangan rute distribusi kasusnya yaitu *Travelling Salesman Problem* (TSP) dan menggunakan 2 metode yaitu Algoritma Greedy dan Algoritma Ant Colony, rute pendistribusian ada 9 lokasi dan perhitungan dilakukan dengan ketiga iterasi. dari ketiga iterasi tersebut di dapat rute terbaik dengan jarak terpendek yaitu di perjalanan pertama (NC-1) dengan nilai awal *pheromon* 0,084 mendapatkan rute terbaik dari semut semut ke-7 dengan rute V7 - V5 - V4 - V1 - V2 - V3 - V6 - V8 - V9 dengan panjang jarak 134,3 Km dengan jumlah *pheromon* ditambah yaitu sebesar $\Delta\tau_{ij} = 0,007$.

Kata Kunci : algoritma ant colony, algoritma greedy, distribusi, standar operasional prosedur (SOP)

ABSTRACT

The Regional Disaster Management Agency (BPBD) of Karawang Regency was formed based on the Regulation of the Regent of Karawang Regency Number 70 of 2016, one of its duties is to distribute logistics supplies to disaster victims. logistics supplies are often late arriving at the disaster site, while logistics distribution must be fast and on target. To deal with these problems, improvements were made, namely by proposing the creation of a Standard Operating Procedure (SOP) for the distribution of aid and making proposals for the design of logistics distribution routes. Standard Operating Procedure (SOP) was made by the researcher, including the Administrative Standard Operating Procedure (SOP), for the Standard Operating Procedure (SOP) made by the researcher as a suggestion, there were 11 activities carried out by officers and there were 6 implementers. For the case distribution route design, namely the Traveling Salesman Problem (TSP) and using 2 methods, namely the Greedy Algorithm and the Ant Colony Algorithm, the distribution route has 9 locations and the calculation is carried out with three iterations. From the three iterations, the best route with the shortest distance is on the first trip (NC-1) with an initial pheromone value of 0.084 getting the best route from the 7th ant ants with routes V7 - V5 - V4 - V1 - V2 - V3 - V6 - V8 - V9 with a distance of 134.3 km with the number of pheromones added, namely $\Delta\tau_{ij} = 0.007$.

Keywords: *ant colony algorithm, greedy algorithm, distribution standard operating procedure (SOP).*