ABSTRACT

One of important factor in relief goods distribution is the pace to fulfill demands. Things that affect the pace to fulfill demands are the amount of donations, the delay of delivery, and vehicle capacity. To distribute relief goods at the right time and right quantity to right people, relief goods distribution needs information visibility and coordination.

This research try to developed a distribution of relief goods model using system dynamics to analyze what will happen with the system when there is input changes, and affect of decision to the pace to fulfill demands. System dynamics was selected to model teh distribution because it can provide a clear description of delivery delays and the affect of decision taken.

This research also aims to analyze the effect of inventory sharing between depots to the pace to fulfill demands through experiments by using 4 different amount of donations. The amount of donation consists of an initial donation, 1.25, 1.5, and 2 times the initial donation. From the experiments, the results showed that the pace to fulfill demands of using inventory sharing are better than same donations input without inventory sharing.

Keywords: distribution, relief goods, system dynamics, inventory sharing;