

عنوان مقاله:

مدل طراحی شبکه امداد یکپارچه برای برنامه ریزی حمل و نقل تحت شرایط عدم قطعیت

محل انتشار:

مجله ی مهندسی صنایع و مدیریت شریف، دوره 39، شماره 2 (سال: 1402)

تعداد صفحات اصل مقاله: 12

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خلاصه مقاله:

Locating facilities in candidate nodes and allocating relief items to these facilities for emergency response before a disaster occurs, is a common approach to increasing the effectiveness of relief logistics. In this study, humanitarian logistics networks and network restoration are represented in the form of an integrated network, so that the damaged routes are repaired by crews using restoration equipment to distribute relief items. In this paper, a two-stage stochastic programming model is proposed in order to locate relief facilities and restoration equipment and distribute relief items to demand nodes as soon as possible. The objective function minimizes the social costs of the problems such as deprivation cost (i.e., the cost imposed on survivors by the lack of access to critical supplies) and logistics costs under each scenario. Also, the flow of trucks carrying relief items and repair equipment on the routes is specified. In order to adapt the model to the real world, according to the nature of the effective parameters of the model, two types of structural and functional uncertainties have been considered. The first source is that some uncertain parameters may be based on future scenarios which are considered according to the probability of their occurrence. The second source is that the values of these parameters in each scenario are usually imprecise and can be specified by possibility distributions. In this regard, a robust fuzzy stochastic programming approach has been used to solve the model. Possibility theory is used

کلمات کلیدی:

شبکه های توزیع امداد و تعمیر مسیرها، عدم قطعیت ترکیبی، لجستیک بشردوستانه، هزینه های اجتماعی

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