

The Influence of Infrastructure, Cost, Risk, and Socio-Demographic Factors on the Selection of Optimal Logistics Hub Location for Hydrometeorological Disaster

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Abstract

Selecting the optimal location for a hydrometeorological disaster logistics hub is a strategic issue in disaster management because it determines the speed of aid distribution and the effectiveness of mitigating social and economic impacts. Problems arise when hub locations fail to consider technical and social factors, resulting in slow and uneven logistics distribution. This study aims to analyze the factors influencing the location selection for a hydrometeorological disaster logistics hub through a literature review approach. The method used was a Systematic Literature Review (SLR), which collected data based on literature studies from various previous studies, then analyzed using thematic synthesis. The results indicate that selecting a logistics hub location requires a multi-criteria approach encompassing infrastructure, cost, risk, and socio-demographic factors. Infrastructure and cost play a critical role in ensuring the efficiency and speed of distribution, while risk and socio-demographic factors determine the sustainability, resilience, and equity of aid distribution. The implication of these findings is the need for local governments and stakeholders to integrate technical and social factors in disaster logistics hub planning to make the distribution system more adaptive, resilient, and responsive to community needs.

Keywords

Infrastructure, Cost, Risk, Socio-Demographic Factors, Logistics Hub.