CHOICE BEHAVIOR MODEL FOR TSUNAMI REFUGE FACILITIES
- Modeling and Analysis of Evacuations in Natori City after the Great East Japan Earthquake -

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Abstract

This study aims to formulate a numerical model to predict choice behavior of refugees seeking a tsunami refuge building in Natori City, on the basis of the survey of the evacuation behavior after the Great East Japan Earthquake, and we discuss the placement of the tsunami refuge buildings. The findings reveal factors that attract refugees toward particular buildings in Natori City. This choice behavior was modeled using a logit model. This model consists of the utility variables that are evacuation direction, distance from the refugee to a building, number of floors of building, building footprint and height above sea level. We confirmed that this model is useful by statistical test values, likelihood ratio and hit ratio.

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