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## Evacuation planning methods considering human behaviour and resilience of transportation systems: A literature review.

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### Abstract

The dramatic increase in the occurrence of natural and man-made disasters makes it necessary to have adequate evacuation management. Evacuation planning is a very significant operation when a disaster strike. In evacuation operations, the main goal is to evacuate people from dangerous zones and transfer them to safer zones in the minimum possible time. Therefore, it is significant for all governments and societies worldwide to have pre-disaster and post-disaster plans to cope with the negative consequences that happen during and after a disaster to save lives and properties. To better understand the available approaches to address this challenge, this study presents a review of evacuation planning models with a focus on the resilience of transportation systems in evacuation operations and human behaviour. The concepts of evacuation planning, resilience, and human behaviour are discussed in this study to identify the research gaps in evacuation problems. Finally, this study's outputs can help decision-makers improve decisions based on the importance of evacuation planning and the resilience of the transport network.

**Keywords:** Evacuation, Transportation System, Resilience, Human Behaviour, Optimisation, Simulation