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## Evacuation Assessment of a Large Passenger Vessel due to Tsunami Attack

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**Summary:** Disaster mitigation management is considered a very important aspect in marine catastrophes, such as a tsunami, especially because drifting ships containing passengers and hazardous substances can cause a huge disaster in a port. It has already been analyzed that at the arrival of a tsunami, it is very hazardous for a large passenger vessel to evacuate passengers first. In this study, the assessment of evacuation at Osaka Bay in Japan is based on Automatic Identification System (AIS) data used as input for a Discrete Event Simulation (DES), which assesses ship evacuation time and using the Geographic Information System (GIS) to determine the locus of ships. The location of ship evacuation is decided in the anchorage area since the time needed for a ship to evacuate outside Osaka Bay is more than the predicted time of a tsunami arrival. In this paper, a preliminary proposed safe area for evacuation is evaluated and the possibility of large passenger vessel evacuation is shown.

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