Interactive comment on “Strategies to increase the accessibility of tsunami shelters enhances their adaptive capacity to risks in coastal port cities: The case of Nagoya City, Japan” by Weitao Zhang et al.

Weitao Zhang et al.
zhangwt2015@outlook.com

Received and published: 15 December 2018

Thank you for your question about the paper. Nagoya City is a very specific and inspiring case study. It effectively represents cities that have a high level of agglomeration, but have different distributions of both hazard-product factors (elevation, soil, river, dangerous source...) and hazard-affected factors (population, socio-economic capital... ). This complex situation presents more challenges for these types of cities, making insufficient safety practices a major problem. City repair and renewal is needed to address problems in this type of complex city environment.

This paper discusses the spatial relationship between tsunami shelters and road systems in different hazard-risk situations. The recommended accessibility-related strategies can be applied to inform both city repair and renewal planning and practice. These strategies match two core elements of city repair and renewal: the city’s response to the high agglomeration of hazard-risk factors using meso/micro-strategies, and the city’s response to different distributions of hazard-risk factors using a classification strategy.

First, because most of the city construction is already completed and saturated, the recommended accessibility-related strategies do not relate to city-level macro-structural adjustment, or large-scale demolition and reconstruction. Instead, they focus on shelter and road reorganization and improvement. Second, the strategies are proposed separately for the hazard-product and for the hazard-affected environment, as these are very different from each other.

In summary, this study’s results and conclusion significantly contribute to practices associated with city repair and renewal planning.