

The comparison of service scope of shelter under different designation of
evacuation range

王櫻燕, 閻克勤, 陳柏仲, 林書存

Architecture and Urban Planning

Architecture

dama@chu.edu.tw

Abstract

Taiwan is located in Pacific seismic belt, one of the three largest seismic belts in the world. This is the primary seismic belt that has the most and strongest earthquakes. Particularly, the 921 earthquake in 1999 signaled a lack of urban planning system and disaster prevention plan. However, formulating urban disaster prevention plan, it is found that the distance between shelter and home is an important selection factor and the designation of evacuation range is currently an important subject. This study is aimed at the designation of urban evacuation range, and estimate the population within the range by utilizing the spatial attribute data established in the geographic information system, as the basis of shelter service scope. Graph overlapping is also conducted with the estimated shelter serviced range (circle) in different designations to compare different disaster prevention plans and describe the effect of effective shelter range on promoting disaster prevention work. The results can be used as references for temporary urban refuge for earthquake and designation of evacuation range.

Keyword : shelter; evacuation range; geographic information system