

Prediction of Refugee Population and Relief Supply at School Districts in an Earthquake
(English Presentation)

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About the summary of this study, we give the introduction to describe below.

1. Development of equation for prediction for refugee population at school district

In the first section, we use the data of damaged building and refugee population cited from the Great Hanshin Earthquake to develop the equation for prediction of refugee population in school district. Because the object predicted is school district, comparing to ward and whole city, the prediction is more correct to reflect the details of building information and local population.

2. Prediction of refugee population of school refuge sites at each school district in Kyoto City

In the second section, we use the equation developed in the first section to give the prediction of refugee population of school refuge sites at school districts based on the earthquake caused by 5 faults: Hanaore, Momoyama, Katagihara, Ujigawa, and Obaku fault. The cases predicted in the study include 24 hours and 4 seasons, there are 200 scenarios at each school district in the case of 1 fault. The outcome can be regarded as reference to do the policy-making in local disaster mitigation on prediction of refugee population.

3. Adjustment of Capacity in all refuge sites in

Kyoto City

In the third section, we give the adjustment for capacity in all refuge sites in Kyoto City at each school district, and give the comparison between corrected capacity and maximum of refugee population in earthquake caused by the specific fault addressed in the second section. The adequacy of refuge sites can be examined by the comparison and give the reference for the increase of refuge sites in the future to meet the possible refugee population at each school district.

4. Prediction of relief supply at each school district and relocation of storages

In the fourth section, we use the outcome of prediction for refugee population in the second section to give the prediction for relief supply at each school district in Kyoto City. The predicted items include Dry Biscuit, Alpha Rice, Pondered Milk, Blanket, Sheet, Portable Toilet. The relocation of storage is based on the corrected capacity of refuge sites in the third section to meet the balance geographically and choose the school refuge as main the object of storage, where the distance away to other refuges is within 250 meters at each school district. The outcome could be regarded as the quantity-evidence when making the police to distribute the relief supply to storage in Kyoto City.