



Earthquake Project Report

Group 7

Evacuation and Shelter Management

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The solution approach is split into two main parts: evacuation and shelter management. If one cannot evacuate people, there is no point in managing shelters. Therefore, evacuation is prioritized based on three criteria. The first one is buildings; people will have evacuation priority depending on the condition of the damage and the type (e.g., hospital, house) of the building. The second one is location; people who live in high population density areas will have priority.

As a part of planning beforehand, examining possible shelter areas is an important step. During this examination, the suitability of location, distance to the fault line, allocation of resources, transportation routes, and area capacity will be considered to optimize the allocation of victims. Also, people are planned to be distributed into shelter areas before the disaster hits to prevent time loss after the disaster.

After disaster hits, previously planned shelter locations will be quickly checked, and if the disaster has not affected these places, installation will be provided in these areas. People will be distributed to the areas where shelters are established on a neighborhood-based basis, not randomly but by planning. In this way, one will know which neighborhood belongs to which shelter. We aim to prevent chaos. Furthermore, we will prioritize the people who will be placed in shelters. Families with children, disabled or sick people, and the elderly will be among the people who will be prioritized. Moreover, to determine resource allocation, the immediate needs in the region hit by the disaster should be known, and resources for these needs should be provided.

While examining suitable shelter locations, attention is paid to their proximity to hospitals and water treatment plants. Since victims need to be placed in different areas in the medium and long term, the distance to transportation lines (e.g., highway, port, and railway) should be considered. In this way, the delivery of supplies to shelters can be faster.

In conclusion, the solution approach aims to minimize chaos, prioritize lives, and efficiently allocate resources for effective earthquake disaster management. The evacuation priorities are identified based on building conditions, population density, and vulnerable demographics. Shelter locations are carefully chosen considering proximity to critical infrastructure and transportation routes. Post-disaster, shelters are swiftly deployed in unaffected areas, ensuring access to essential services.