

Development of A Disaster Information System & An Earthquake Loss Estimation Tool for Istanbul

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Abstract

Two devastating earthquakes occurred in Turkey, one on August 17 and the other on November 12, 1999. The magnitudes were 7.4 and 7.2, respectively. The epicenter of the first earthquake was located in Golcuk, a town near Kocaeli province, 110 km from Istanbul. The epicenter of the second earthquake was in Duzce, 150 km from Istanbul. The both earthquakes killed more than 20000 people according to the official records. The earthquake affected 10 cities including Istanbul. The affected area has a population of 20 million, which is one third of the whole population of the country. Almost half of the economical infrastructures are located in this region. According to the earth scientists, Istanbul is expecting an earthquake with a magnitude of about at least 7.0 within the next 25-30 years. Therefore, Turkey has been preparing Istanbul for the next devastating earthquake since mainly 1999.

This paper will mainly explain the strategies and methodologies for the establishment of the Istanbul Disaster Information System, which has been sponsored by the State Planning Department of Turkey. The system will provide the user association to reach the current, correct, and consistent data. The aim of the project is to create an information system which has the capability to help the decision makers, ministries, governments and municipalities to conduct the planning, mitigation, response and recovery phases of the emergency management, by using modern satellite techniques and information systems, before, during and after the disaster occurs. This project will be an application for the city of Istanbul for an example to GIS based information and management system standard for the whole similar applications in Turkey. In this study, the southern costs of the Istanbul City will be taken into consideration because of the scientific reports which were published on this matter.

In addition, the paper will also explain a project called “Development of An Earthquake Loss Estimation Tool for Istanbul” which has been sponsored by the Istanbul Metropolitan Municipality.

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