

TITLE: Earthquake Damage Analysis Program for Istanbul (HAZTURK)
LANGUAGE: ENGLISH
PUBLICATION TYPE: Report

SUMMARY/ABSTRACT

After the 7.4 and 7.2 magnitude earthquakes in Gölcük and Düzce, on 17 August and 12 November 1999, at 03:02 and 18:57, respectively, and lasting 47 and 30 seconds, the next major earthquake in the region is expected to occur in the Marmara Sea and It is predicted that it will affect Istanbul. As explained in detail in Section 5.2, four different scenarios were prepared for anticipated Istanbul earthquake by the Japan International Cooperation Agency (JICA) and Model A, one of these scenarios, was accepted as the most likely scenario. According to Model A, 120 km east of the fault line in the Sea of Marmara will break and due to this break, the seismic movement will be directed to the west. The magnitude of the earthquake was predicted as 7.5 moment magnitude. It is clear that a disaster of this magnitude, which is expected to occur in Istanbul, will have inevitable and irreversible consequences in terms of both human life and the economy of the country. Therefore, in order to be prepared for the most probable disaster, it is necessary to predict which regions, which types of structures will affect the most, and what kind of financial statement this disaster will create before the disaster occurs. This estimation is significant for being prepared for a possible earthquake, such as reducing the potential damages, rapid and economic recovery after the earthquake. This mechanism is frequently used for earthquakes in the world and gives successful results. One of the most important component for damage estimation is the software that can realize all possible scenarios in the relevant region and will enable the effects of these scenarios on the structures to be seen and recommend the necessary reinforcements to reduce these effects. In this report, the development stages and working principles of the damage estimation and loss assessment software prepared for this purpose are explained. The explanations for using the software and results of analysis and comparison will be given in the final report.

ORGANIZATION: Istanbul Metropolitan Municipality

ORIGINAL PUBLICATION URL: https://8luvomezzzsk.merlincdn.net/wp-content/uploads/2020/04/IBB_HAZTURK_Rapor.pdf

REGION & COUNTRY: TÜRKİYE

HAZARD: EARTHQUAKE

THEMES: LOSS ESTIMATION PROGRAMME