

Interactive comment on “Geophysical and geotechnical factors in urban planing: Bursa (Nilüfer, Osmangazi, and Yildirim) cases” by Ferhat Özçep et al.

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First of all, I congratulate all the authors of the article. The presented article is extremely valuable in terms of including the microzonation studies and what kind of geophysical and geotechnical studies have been done in these studies, and contains specificity. The data required for soil amplification and liquefaction, two of the three important stages of microzonation studies, were collected, processed and interpreted for the project area. When evaluated in this context, the article presented provides a very detailed base for studies on microzonation. By mapping all the data collected and evaluated within the scope of the project, the average shear wave velocity up to

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30m, soil dominant period, soil amplification and liquefaction potential index maps were produced for the project areas. Thus, taking into account the earthquake hazard, the contributions of geophysical measurement studies to determine the risks that may occur in relation to soil properties have been shown in this study. In conclusion, I wish this study, which is an example of microzonation mapping in earthquake disaster safe and resistant city and regional planning, will be a reference for all provinces and districts of our country.

However, I would like to bring a few points to the attention of the authors.

(1) The following sentence in the summary part is written twice.

"Local amplification caused by surficial soft soils is a significant factor in destructive earthquake motion. In the first phase of this study, it is investigated the ground motion level and soil amplifications for Bursa city. For his aim, probabilistic and deterministic earthquake hazard analysis (including acceleration estimations) will be carried out for the region."

(2) Line 52-56: following sentences should be revised and combined.

In this study, geological, geophysical and is used as an all geotechnical data and its first land-use planning as reflected in the physical planning of a city or in other words for estimation of local earthquake risk in Turkey. This city is the town of Kuyucak in Aydaşın province (Gülkan ve Ergünay, 2002, Kozacık ve diğ., 1969).

(3) Line 76-79

The sentence, "In this study, Multi-Channel Analysis of Surface Wave (MASW) analysis measurements were made at 100 points carried out to obtain shear wave velocities (Vs) in the site-effect investigation. Using MASW, shear wave velocity was obtained at 100 points up to 50 meters deep from the surface." should be revised as "In this study, Multi-Channel Analysis of Surface Wave (MASW) analysis measurements were made at 100 points carried out to obtain shear wave velocities (Vs) up to 30 meter in the

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site-effect investigation."

(4) Line 82-83: the term, "Uniform Building Code, 83 Eurocode, etc)" should be omitted.

(5) In the line 346, authors say that MASW surveys to estimate the Shear wave velocity have been achieved at 100 different points. But, in the result, in line 547, it is written as 150 points. The differences should be removed.

I hope that these comments will contribute to the development of the article. Best regards, Hakan KARSLI, Ph.D from Karadeniz Technical University, Department of Geophysics, hkarsli@ktu.edu.tr

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