



Determination of the Ground Characterization in Canakkale within the Scope of Liquefact Project

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The main objective of this study is the determination of the soil properties of Canakkale test site depending on the EU H2020 LIQUEFACT project titled "Liquefact: Assessment and mitigation of liquefaction potential across Europe: a holistic approach to protect structures/ infrastructures for improved resilience to earthquake-induced liquefaction disasters". The concept of the study includes pre-existing investigations and complementary (in-situ and laboratory) tests. As part of complementary tests, 6 investigation areas had been chosen in Canakkale site and in-situ tests had been performed. In-situ tests can be considered as Standard Penetration Test (SPT), Cone Penetration Test (CPT (CPTU and SCPT)), Marchetti Dilatometer Test (DMT) and geophysical measurements. In the investigation areas, boreholes had been opened to perform Standard Penetration Test (SPT). In addition to SPT, CPT and DMT had been carried out. Geophysical measurements that applied during research were downhole seismic, PS-logging, seismic refraction, 2D-Remi, MASW, microtremor (H/V Nakamura method) and 2D resistivity profiling. Seismic refraction, MASW, and microtremor measurements had already been performed in pre-existing studies although the dynamic soil properties had not been measured. Therefore, these properties had been measured by using resonant column and cyclic direct shear test. The general idea is to compare results of the geophysical and other measurements, to identify ground characterization of the site.