



Investigation of Persembe Yenikoy Landslide

A. Kayahan (1), S.B. İkizler (1), Z. Angın (1), G. Demir (1), and E. Subaşı (1)

(1) Karadeniz Technical University, Civil Engineering, Trabzon, Turkey (ahmetkayahan@yahoo.com), (2) Karadeniz Technical University, Civil Engineering, Trabzon, Turkey (banuh73@gmail.com), (3) Karadeniz Technical University, Civil Engineering, Trabzon, Turkey (angin@ktu.edu.tr), (4) Cumhuriyet University, Civil Engineering, Sivas, Turkey (gokhandemir61@hotmail.com), (5) Gumushane University, Civil Engineering, Gumushane, Turkey (subasi_esra_53@hotmail.com)

In the last two years, the province of Ordu located in central part of the Black Sea Region (on the border of Eastern Black Sea region) has experienced heavy rainfalls that have caused floods and landslides. A landslide occurred in 19 August 2011 in Persembe district of Ordu. It has been named as Persembe Yenikoy (a village of Persembe) landslide. The landslide, triggered by heavy rainfall swept away a huge area of about 4-5 times a football ground. It caused collapse of a house and 2 people died. Besides, 9 houses were affected and evacuated. In this study, disturbed and undisturbed samples have been taken from the area and several laboratory tests have been carried on these samples to investigate the geotechnical properties of the soil profile and explain the reasons of the landslide. Soil profile in the area consists of silt of high plasticity (MH). The results of the laboratory tests have been presented and finite element analysis with Plaxis 2D has been performed for modeling of the landslide. The results may be used in landslide analysis in the regions having similar soil characteristics and site conditions. They will be presented to the local authorities to assess landslide prone areas and prevent similar damages and live losses in the future.

Key Words: Landslides, Rainfall, Ordu, Turkey