

GEOENVIRONMENTAL PROPERTIES OF THE NATURAL AND HISTORICAL STRUCTURES IN CAPPADOCIA (TURKEY)

BABA, A. DOKUZ EYLUL UNIVERSITY, FACULTY OF ENGINEERING,
DEPARTMENT OF GEOLOGICAL ENGINEERING, BORNOVA, IZMIR, TURKEY

The Cappadocia region is an important tectonic site of Turkey. This region is very popular, with geological and geomorphologically distinct features- the so-called fairy chimneys and the relicts of ancient civilizations. The distinct features in the Cappadocia region are developed in the Neogene Sequences consisted of tuffs, tuffite, ignimbrites, lahar, volcanic ash and marl intercalations. This paper describes the main types of damage observed in the natural and historical structures. One of the important damage is mainly due to the effect of surface water flow and ground water. Rainwater penetrating into the capillary cracks in the heterogeneous structure of the tuffs, due to the changes in atmospheric conditions, freezes there and causes the cracks to get wider and, in time, parts break off the main block. The ground water activity is also an important factor that influence the stability of structures, especially in cases where they are buried in the soil or they are founded on steep slopes.