

MONITORING THE TEMPORARY STABILITY OF THE PODIȘU DAM FROM IASI COUNTY BY ADVANCED TOPOGRAPHIC MEASUREMENTS

Ioana AGAPIE (MEREUȚĂ)¹, Mihail LUCA¹, Paul-Marian GHERASIM¹

e-mail: ioanaagapie@yahoo.com

Abstract

The paper presents elements of analysis of the temporal stability of earth dams by using topographic methods. Structural deformations and displacements are determined and processed by data obtained from advanced topographic studies on the geometry of the dam construction. The studies and researches were carried out for the Podișu earth dam located on the Valea Oii river, Bahlui river basin, Iași county. Special hydrological events recorded in recent years in the Bahlui river basin and especially on the Valea Oii river, have influenced the stability of the earth dams in cascade in this area. Monitoring the structural condition of dams and obtaining stability analysis data were made by topographic surveys in 2006, 2017, 2019. To carry out in accordance with the legislation in force the monitoring of the behavior of constructions, they must be equipped with settlement tracking landmarks but also fixed landmarks. This situation is not fulfilled at most class C and D earth dams. In the absence of tracking marks, in 2019 four landmarks were installed at the Podișu dam and a local tracking network was created. With the help of topographic measurements, the constructive elements of the earth dam were reconstructed and the analysis base of the stability model was restored (situation plan, longitudinal and transversal profiles, constructive details etc.).

Key words: database, deformations, topographic plan, profiles, settlement landmarks