

Review of 50 years geotechnical studies at Amman-Jarash Highway landslides in Jordan

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Abstract

Landslides in Jordan caused many problems during the last 50 years which causes the loss of millions of Jordanian Dinars in addition to the waist of efforts and times for the government.

The review of Amman-Jarash Highway landslides defined the main causes of landslides and rock mass movement. Previous works of geotechnical studies are summarized, and stability measures are discussed and analyzed to establish solution and recommendations.

The present study aims to convert the dangerous areas to green areas and the needs for annual maintenance to the drainage system along the highway before the winter season. In addition to concrete injection in unstable areas along the highway and construct emergency road to the east parallel to the highway particularly from Zarqa river bridge to the bridge of Jerash entrance due to presence of geodynamic activity which leads to landslides. Moreover, construct gabions in weak and unstable area along the high way to protect the area from mass rock movements and rockfall. Finally, annually evaluation highly is needed to the highway by competent and experience geological engineers as they are specialists.

Key: Landslides, geotechnical, geodynamics, highway, drainage, geological engineers, gabions, concrete and injection.