

## Dynamic Study on the Evaluation of the Settlement of Soil under Sea Dam

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**Abstract :** In order to study the variation in settlement of soil under a dyke dam, the modelisation in our study consists of applying an imposed displacement at the base of the mass of soil (consisting of a saturated sand). The imposed displacement follows the evolution of acceleration of the earthquake of Boumerdes 2003 in Algeria. Moreover, the gravity load is taken into consideration by taking account the specific weight of the materials constituting the dyke. The results obtained show that the gravity loads have a direct influence on the evolution of settlement, especially at the center of the dyke where these loads are higher.

**Keywords :** settlement, dynamic analysis, rockfill dam, effect of earthquake, soil dynamics

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