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## DAM BREAK RISK ASSESSMENT USING TELEMAT AND GIS TECHNOLOGIES: CASE OF HAMIZ DAM IN ALGERIA

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### ABSTRACT

The risk of dam failure is very low, however the consequences of such accident, when it occurs, can be catastrophic, causing thousands of deaths and massive property damage. It is always necessary to evaluate the consequences of a potential dam break. In The present study the two-dimensional modeling of dam break wave propagation of Hamiz dam was conducted using the TELEMAT system, the calculations allowed us to estimate the hydrodynamic characteristics in the downstream area at risk. A geographic information system (GIS) was set up to map the results and analyze the impacts of the resulting flooding on the affected areas. The study results that demonstrate the significance of Hamiz dam break flooding allow the elaboration of an Emergency Action Plan (EAP) that specifies preplanned actions to be followed to minimize property damage and loss of life.

**KEYWORDS:** Dam failure, Hamiz dam, TELEMAT, GIS, Emergency Action Plan.