

Higher National School of Hydraulic

The Library

Digital Repository of ENSH



المدرسة الوطنية العليا للري

المكتبة

المستودع الرقمي للمدرسة العليا للري



The title (العنوان):

Flooding study in the desert climate zone: case study of M'zab valley (Algeria)

The paper document Shelf mark P22-26 : (paper version not available)

APA Citation (APA توثيق):

Teffah Ouardia Gueciouer, Guettouche Mohamed Said, Zeroual Ayoub (2022). *Flooding study in the desert climate zone: case study of M'zab valley (Algeria)*. Journal of Applied Water Engineering and Research. p.1-17 . DOI ou URL : <https://www.tandfonline.com/doi/abs/10.1080/23249676.2022.2030253>

The digital repository of the Higher National School for Hydraulics "Digital Repository of ENSH" is a platform for valuing the scientific production of the school's teachers and researchers.

Digital Repository of ENSH aims to limit scientific production, whether published or unpublished (theses, pedagogical publications, periodical articles, books...) and broadcasting it online.

Digital Repository of ENSH is built on the open DSpace software platform and is managed by the Library of the National Higher School for Hydraulics. <http://dspace.ensh.dz/jspui/>

المستودع الرقمي للمدرسة الوطنية العليا للري هو منصة خاصة بتقييم لإنتاج لأساتذة باحثي المدرسة.

يهدف المستودع الرقمي للمدرسة إلى حصر الإنتاج العلمي سواء كان منشورا أو غير منشور (طروحات، مطبوعات، مبداعات، مقالات، الدوريات، كتب...) بثه على الخط.

المستودع الرقمي للمدرسة مبني على المنصة المفتوحة DSpace و يتم إدارته من طرف مديرية المكتبة للمدرسة العليا .

كل الحقوق محفوظة للمدرسة الوطنية العليا للري

Abstract : The aim of this research is the modelling and mapping of flood risk zones in the M'zab valley of Ghardaia city by combining the hazard map and the flood vulnerability map. The undertaken research utilizes the hydrologic engineering centre-hydrologic modelling system as the modelling tool to simulate the runoff in the watershed and hydrologic engineering centre – river analysis system to model the water levels of different river locations based on steady flow analysis and to define flood-prone areas. The flood risk map allows the identification of five classes ranging from a low to a very high risk of flooding. Thus, the low to very low-risk areas extend over roughly 70.58% of the total surface area of Ghardaia city. These areas, which are located in the southern part of the alluvial plain, are considered as low vulnerability regions, while areas with high-risk cover more than 20% of the city.

Key words : Hydrological modelling ; HEC-RAS ; Flooding hazard ; Vulnerability ; Flood risk ; Touzouz river (Ghardaia)

Available from: <https://www.tandfonline.com/doi/abs/10.1080/23249676.2022.2030253>