

Higher National School of Hydraulic

The Library

Digital Repository of ENSH



المدرسة الوطنية العليا للري

المكتبة

المستودع الرقمي للمدرسة العليا للري



The title (العنوان):

Effects of temperature and relative humidity on the COVID-19 pandemic in different climates: a study across some regions in Algeria (North Africa)

The paper document Shelf mark P21-07 :(paper version not available)

APA Citation (APA توثيق):

Boufekane Abdelmadjid, Busico Gianluigi, Maizi Djamel, (2021). *Effects of temperature and relative humidity on the COVID -19 pandemic in different climates: a study across some regions in Algeria (North Africa)*. Environmental Science and Pollution Research . p. 1-26. DOI ou URL : <https://link.springer.com/article/10.1007/s11356-021-16903-x>

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Digital Repository of ENSH aims to limit scientific production, whether published or unpublished (theses, pedagogical publications, periodical articles, books...)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 بثمين لإنتاج لأساتذة باحثي المدرسة.

يهدف المستودع الرقمي للمدرسة إلى حصر الإنتاج العلمي سواء كان منشورا أو غير منشور (طروحات، مطبوعات، مقالات، دوريات، 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 : After more than a year from the first confirmed cases of coronavirus (COVID-19) disease, the role of meteorological factors in the transmission of the virus still needs to be correctly determined. In this scenario of deep uncertainty, the present study aims to investigate the effects of temperature and relative humidity on daily new cases of COVID-19. For this purpose, the COVID-19's development of infection in fourteen Algerian cities characterized by different climatic conditions, during the period from April 1, 2020, to August 31, 2020, has been investigated. A detailed time series analysis along with linear regression was used to state a possible correlation among some climate's factor variability (temperature and relative humidity) and daily new confirmed cases of COVID-19. The results showed a weak correlation between daily new cases of COVID-19 and meteorological factors throughout the selected regions. In addition, we concluded that the COVID-19 could fit to high or low values of temperature and relative humidity, and other factors not climates could affect the spreading of the virus like demography and human contact. So, after the discovery of the vaccine and before vaccination of 70% of the world's population, living with the virus has become an inevitable reality, and it is mandatory to apply the sanitary procedures to slow down the COVID-19 transmission.

Keywords : COVID-19 ; Temperature ; Relative humidity ; Climatic conditions

Available from : <https://link.springer.com/article/10.1007/s11356-021-16903-x>