

International Conference on

EARTH SCIENCE AND CLIMATE CHANGE

September 06-07, 2018 | Zurich, Switzerland

The Impact of hydro climatic variability on water resources of Lake Chad Hydro Graphic Basin

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This study shows the impact of hydro climatic variability on water resources in the Lake Chad watershed. The application of Nicholson and Maillet methods and statistical tests for homogeneity (Buishand's, Hubert's, Lee and Heghinian's and Pettitt tests) made it possible to demonstrate a climatic variability characterized by alternation Wet, normal and dry season with a long deficit period that began around 1977 and resulted in an impoverishment of water resources in Chad. This decline in rainfall decreases the flow of water that passes through the Lake Chad basin. According to the Buishand test, this

decrease in water level is marked by a very significant break, which oscillates between 90% and 95% in the years 1982 for the stations assumed in the center of study area such as Moundou and Bousso. The study found that in the 1960s Lake Chad covered an area of 25,000 km², under the combined effect of climate change; its surface area shrank to 2,500 km² in 2004. This hydro-climatic variability has a negative impact on agricultural, pastoral and fisheries activities and is a major threat to the population living around this basin.

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