Comparision of the Trends of Mean Temperature and Rainfall Rate in the City of Samawah (Iraq) with Global Climate Change

Abstract-Increasing earth temperature due to the high level of greenhouse gas has affected the other climate elements on the earth surface. However, there was a little consideration of the differences between the global and local scale of climate change. This research included a comparison between the global climate change and the changes of climate elements that happened in Samawah city. The results showed that there is a significant difference between the increasing annual mean temperature globally and the annual mean temperature in the city. For example, when comparing the increase in annual mean temperature of the city for the period from 2006 to 2015 (ten years) with annual mean temperature globally based on the average of mean temperature for the previous 30 years (1975-2005), we note that there was increasing for the years 2010 and 2011 is almost four times and it was double for the years 2012, 2013, 2014 and 2015 higher than the increasing of annual mean temperature for the same years globally. Also, the mean temperature of the hot months of the summer season (JJA) in the city increased significantly compared to the rest of the months of the year and it is quite different from the change that occurred in the monthly mean temperature globally. Moreover, the annual average of precipitation in the city has fluctuated significantly due to the changes in climate and contrast to the increase in its global average. All these changes in the climate of the city will inevitably have an impact on the environment such as increasing drought, desertification and dust storms.

Keywords: climate change, mean temperature, global, Iraq

How to cite this article: A. Hussin, “Comparison the Trends of Mean Temperature and Rainfall Rate in the City of Samawah (Iraq) with Global Climate Change,” Engineering and Technology Journal, Vol. 37, Part C, No. 1, pp. 168-174, 2019.