

## الملخص باللغة الإنجليزية

Climate change phenomenon and its effects on Palestinian territory was studied using quantitative and statistical methods. The study was conducted in Ramallah/Al-Bireh, Jerusalem and Jericho as a case study. It studied the trends of rainfall and temperature by doing correlation coefficients at multi scales : monthly , seasonal and annual base. In addition the study tested the drought indexes according to the classifications of SPI. The study also tested and compared current and past trends of rainfall and temperature by using kernel and loess smoothing approach as well as descriptive and average approaches.

The study found that there is statistically significant climatic changes in the study area, such as : Increasing the average temperature at monthly, seasonal and annual basis in Ramallah/Al-Bireh and Jerusalem. There is also significant Decrease in monthly, seasonal and annual amount of rainfall in the study area, which is obvious in the increase of frequency and intensity of drought periods during the past two decades in the study area .

Analysis of the questionnaire supported the results that the study has reached through statistical approach. Analysis of the questionnaire indicated that the farmers in the study area assured decreasing trends in both the amount of rainfall and in the cultivated lands that were belonging to them, in addition to increasing both the temperature and drought occurrence recently.