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Effects of global climate change on arab countries

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Abstract: Global climate change due to greenhouse gasses and aerosols and changes in the Earth's surface resulting from various human activities, which leads to increased concentrations of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), chlorofluorocarbons (CFCs) and Water vapor in the atmosphere. Which caused global warming since the industrial revolution in 1975 and it has become a global problem on the environment. The aim of this study is to provide general information on climate change and its impact on the environment in Arab countries and to find appropriate solutions to reduce of the causes these climate changes and mitigation on the environment. In this study, effects of global climate change on Arab countries evaluated according to impacts of climate change in terms of the impact of sea-level rise (SLR). Through the results of the study, it has found that the land area of Qatar is witnessing a significant reduction ranging from 2.6% at SLR of 1m to 13 % at SLR of 5m. And we found that the GDP of Egypt is witnessing a reduction approximately ranging from 3% at SLR of 1m to 8 % at SLR of 5m. And where find that the agricultural extent of Egypt is witnessing a reduction approximately ranging from 11% at SLR of 1m to 22 % at SLR of 5m. And Where find that the urban extent of Mauritania is witnessing a reduction approximately ranging from 4% at SLR of 1m to 31 % at SLR of 5m. Also, it has found that the wetlands of Qatar are witnessing a reduction approximately ranging from 21% at SLR of 1m to 73 % at SLR of 5m.As well as this study has indicated to the impact of global climate change on freshwater sources and most of the Arab countries do not have adequate water sources. The total water resources are the compilation of the total renewable water for each of the internal surface water, the external surface water and groundwater. where the countries of Iraq, Sudan and Egypt have the largest amount of water resources of 75, 65 and 58 billion m3/year, respectively. As well each of Lebanon Tunisia. Yemen, Mauritania. Algeria, Somalia, Syria, and Morocco come in the second region in terms of the amount of water resources between 5 to 30 billion m3/year. As well as this study has indicated to the impact of increasing drought. Some semi-arid and subhumid regions of the Arab countries have suffered from more intense and multi-annual droughts.Previous studies indicate an increase in drought through the last 20-40 years in Morocco, Tunisia, Algeria and Syria where the average drought in Morocco has changed from one year of drought in each five-year period before 1990 to a full year for each two-year period. The problem of global climate change in the Arab countries needs much attention and study by integrating the effects of climate change and adaptation into development plans and strategies and policies that strengthen these strategies and increases their efficiency.

Keywords: Global warming, Climate change, Arab countries