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J Coast Zone Manag 2018, Volume 21
DOI: 10.4172/2473-3350-C1-006

The effect of Egyptian western desert forestation on the regional climate

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Population congestion is one of the most persisting issues in Egypt. It not only affect the social life but it plays a significant role in the economy development as well. Until the late 80's constriction on spatial expansion was imposed by governmental authority and ownership of the surrounding desert. Terrestrial biosphere and the climate are considered to be interacting subsystems where each one has an effect on the other. A regional climate model is characterized by an increase in the resolution of the global climate model which utilizes the small limited area of interest for investigation in the predication process. RegCM, the international center for theoretical physics ICTP regional climate model is one of the most commonly used all over the world. Even though that the difference between the control predictions and the results of the experiment is quite insignificant, but it would imply that there might be a change if it was used for a longer period. Extreme experiments where the tested hypothesis is almost impossible can give us insight about how little changes would affect the climate on the long term, as well as the relationship between vegetation and several parameters. The accuracy of the model was higher as the area of study moves away from water bodies. For this experiment to have improved and more useful results, it has to be carried out on a larger time scale. The analysis should also be carried out on different stages because the anomaly visualization is not enough to interpret the undergoing phenomena. The results of such research might motivate those in charge into moving forward towards the forestation of the desert.

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