



Environmental consequences of the climate change in tropical regions

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The present study shows the first evidence of the global warming in the Colombian Caribbean region and more particularly in the Departamento de Córdoba. According to the results obtained for six selected meteorological stations of the mentioned Departamento, the analysis of the air temperature variation and the calculation of the water deficit for a time period of 30 years show an air temperature increase between 0.5 °C and 0.7 °C and the subsequent water deficit increment as a result of the great water evaporation of the different surfaces. The ENSO influence on the global warming will be also discussed. The global warming of this region, caused by uncontrollable forest deforestation and unsuitable agricultural and livestock activities, yields to environmental alterations, specially in vegetation cover and soil quality. Meteorological data, agrarian information and digital satellite images were used for analyzing the environmental changes occurred in the studied zone during the selected period of time. Besides the identification of the global warming and the quantification of the environmental deterioration of the zone of study (digital thematic maps), the results obtained can be considered as a contribution for establishing general criteria for the further adequate management of it.