



## **Definition of impact indexes in Central American countries suffering food insecurity**

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Central American region is continuously affected by negative climatologically events. These events have great impact in the agricultural production and especially in the regions more vulnerable originating food insecurity and lack of nutritional status. One of the biggest problems associated to the negative impact is the high risk of soil losses through flooding. The soil conservation practices are highly associated to the development of impact indexes to prevent losses of crop and animal production in order to mitigate food insecurity. The different scenarios modelled for the future according to the Intergovernmental Panel for Climatic Change (IPCC) have predicted an increase in temperature and greater climatologically variations in the region. For that reason the main objective of the present study was to define and calculate different impact indexes to minimize and mitigate the potential negative effects emerging for the future climatic situation. To obtain the different predicted scenarios a new technique of statistical regionalization based on the analogue methods in two steps. This technique has been developed by the Climate Research Foundation (Fundación para la Investigación del Clima, FIC) and it gives daily series of temperature, minimum and maximum temperatures, and the average rainfall for the whole XXI Century. The scenarios evaluated the potential climatologically situations in order to assure food security for the whole population of the region through the implementation of soil conservation practices.