

Projections of Climate Change in the Rain Regime of the Ibicui River Basin

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Abstract : The global concern about climate change has been increasing, since the emission of gases from human activities contributes to the greenhouse effect in the atmosphere, indicating significant impacts to the planet in the coming years. The study of precipitation regime is fundamental for the development of research in several areas. Among them are hydrology, agriculture, and electric sector. Using the climatic projections of the models belonging to the CMIP5, the main objective of the paper was to present an analysis of the impacts of climate change without rainfall in the Uruguay River basin. After an analysis of the results, it can be observed that for the future climate, there is a tendency, in relation to the present climate, for larger numbers of dry events, mainly in the winter months, changing the pluviometric regime for wet summers and drier winters. Given this projected framework, it is important to note the importance of adequate management of the existing water sources in the river basin, since the value of rainfall is reduced for the next years, it may compromise the dynamics of the ecosystems in the region. Facing climate change is fundamental issue for regions and cities all around the world. Society must improve its resilience to phenomenon impacts, and spreading the knowledge among decision makers and citizens is also essential. So, these research results can be subsidies for the decision-making in planning and management of mitigation measures and/or adaptation in south Brazil.

Keywords : climate change, hydrological potential, precipitation, mitigation

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