

عنوان مقاله:

STATISTICAL DOWNSCALING of CMIP5 MODEL for CLIMATE CHANGE IMPACT ASSESSMENT in the PERSIAN GULF

محل انتشار:

دوازدهمین همایش بین المللی سواحل، بنادر و سازه های دریایی (سال: 1395)

تعداد صفحات اصل مقاله: 2

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خلاصه مقاله:

Climate change is any long-term change in the patterns of average weather of a specific region or the whole Earth, which reflects abnormal variations to the climate and subsequent effects on other parts of the Earth. Excessive use of fossil fuels will increase the concentration of greenhouse gases which cause global temperature to rise. This phenomenon cause change in ocean circulation, sea ice and glacial melt, species extinction, sea level rise and changing weather patterns etc. Life of people in coastal areas highly depends on the sea and the beach and therefore, predicted effects will impose a number of challenges to them. The main tools used to project climate are General Circulation Model (GCMs), which are computer models that mathematically represent various physical processes of the global climate system. These processes are generally well known but often cannot be fully represented in the models due to limitations on computing resources and input data [1]. In order to derive climate projections at scales that are desirable for the researchers and decision makers, a process termed downscaling has been developed. Many studies have been assessed different models of CMIP5 -the last framework for climate change modeling published by the Intergovernmental Panel on Climate Change (IPCC) - in different areas such as Australia [2] and the Persian Gulf [3], which showed that the GCM data are required to be downscaled. Moreover, some studies have also performed downscaling of the data in different areas [4, 5]. As mentioned by Alinejhad et al. [3], CMIP5 wind data in the Persian Gulf must be downscaled and localized. This paper represent the results of two statistical methods of downscaling for wind speed data in the Persian Gulf, which can be utilized to assess the effects of climate change there.

کلمات کلیدی:

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