

Climate Change Projections and the Associated Potential Impacts for Somalia

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ABSTRACT

Somalia has faced severe challenges linked to climate variability, which has been exacerbated by conflict and limited governance that persisted for decades. Today climate extremes such as floods, drought, and coastal marine severe systems among others are always associated with the destruction of property and livelihoods; losses of lives lost, migrations, and resource based conflicts among many other miseries. Intergovernmental Panel on Climate Change (IPCC) has shown that climate change is real and requires sound knowledge of local future climate change scenarios. The study attempted to provide projected rainfall and temperature change scenarios over Lower Jubba, Somalia. This was done using the downscaled Coordinated Regional Downscaling Experiment (CORDEX) RCMs data. The simulated temperature and rainfall data derived from the CORDEX RCMs ensemble were compared with the observed data. The study focused on the IPCC projected periods of 2030, 2050 and 2070 benchmarks. Analysis of the projected rainfall indicated a decreasing trend in rainfall leading up to 2030 followed by an increase in rainfall with the 2050 and 2070 scenarios. In the case of temperature, the projections from all the models showed increase in minimum and maximum temperatures in all seasons and sub periods, like being observed by temperature projection over other parts of the world. The 2030, 2050 and 2070 projected rainfall and temperature change scenarios show that Somalia future development and livelihoods will in future face increased threats of climate extremes unless effective climate smart adaptation systems form integral components of national development strategies.

KEYWORDS

Climate Change, Climate Modeling, Somalia, Projections, CORDEX

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See more at: http://file.scirp.org/pdf/AJCC_2018051716245429.pdf