



Investigation of Change in Climate and Aridity Conditions of Sub-Saharan Africa

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It is expected that climate change will affect Sub-Saharan countries in many ways. It is possible to combat droughts, precipitation and heatwaves with applications such as early warning systems and enhancing adaptation capacity of the people in the face of extreme climate events caused by climate change. The increase in the frequency and intensity of extreme climate events will be an important factor that aggregate the sectoral risks. In the study, changes in climate and aridity conditions for 16 Sub-Saharan countries (i.e. Angola, Botswana, Cameroon, Ghana, Kenya, Tanzania etc.) are analyzed within the scope of exposure to extreme climate events. Climate change are examined in two parts. First of all, the current temperature and precipitation trends of these countries are revealed by using CRU observation data set prepared by the Climatic Research Unit of University of East Anglia. Additionally, the aridity conditions of the countries are classified for the period of 1970-2015 using the aridity index determined by the United Nations Environment Program (UNEP). In the second part of the study, temperature and precipitation changes in Sub-Saharan are examined under different representative concentration pathways by using various global climate model outputs for the near-term (2025-2049), mid-term (2050-2074) and long-term (2071-2095) with respect to the reference period.

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