# Analysis of Linear Scaling Method in Downscaling Precipitation and Temperature

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**ABSTRACT**

Climate change is one of the greatest challenges in the 21st century that may influence the long haul and the momentary changeability of water resources. The vacillations of precipitation and temperature will influence the run of and water accessibility where it tends to be a major issue when the interest for consumable water will increase. Statistical downscaling model (SDSM) was utilized in the weather parameters forecasting process in every 30 years range (2011-2040, 2041-2070, and 2071-2100) by considering Representative Concentration Pathways (RCP2.6, RCP4.5, and RCP8.5). The Linear Scaling (LS) method was carried out to treat the gaps between ground/ observed data and raw/ simulated results after SDSM. After the LS method was executed to raw/ simulated data after SDSM, the error decrease reaches over 13% for rainfall data. The Concordance Correlation Coefficient (CCC) value clarifies the correlation of rainfall amount among observed and corrected data for all three (3) RCPs categories. There are very enormous contrasts in rainfall amount during the wet season where CCC-values recorded are 0.22 and beneath (low correlation). The findings demonstrated that the rainfall amount during the dry season will contrast for all RCPs with the CCC-values are between 0.44-0.53 (moderate correlation). RCP8.5 is the pathway with the the most elevated ozone-depleting substance emanations and demonstrated that the climate change impact is going on and turn out to be more awful step by step.

**KEYWORDS**: Bias correction, Linear scaling, Statistical downscaling model, Representative concentration pathways

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