

FIGURE 1 Index map of Eastern Gujarat

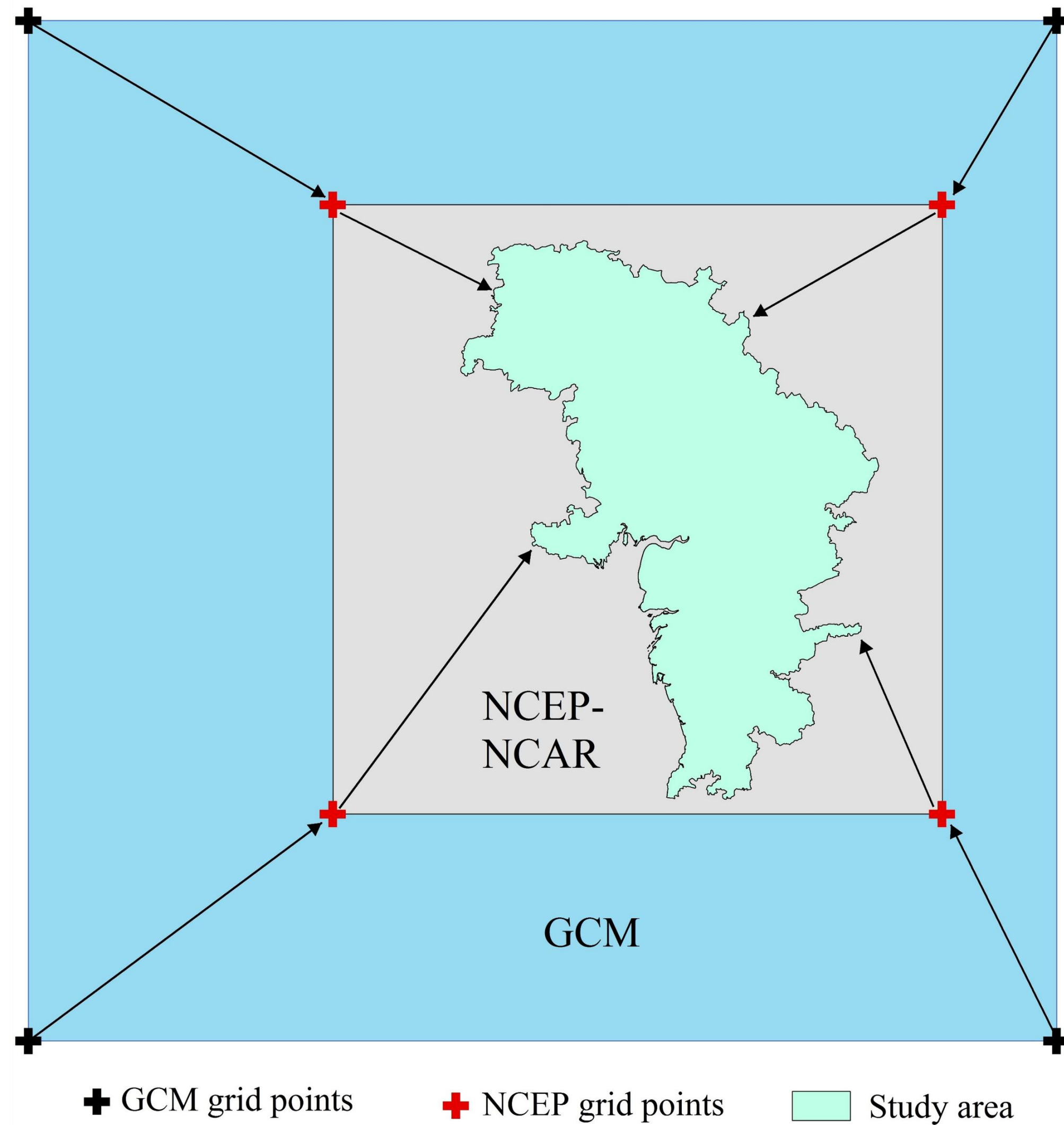


FIGURE 2 Schematic drawing presenting the link among NCEP-NCAR variables, GCM variables, and the predictand

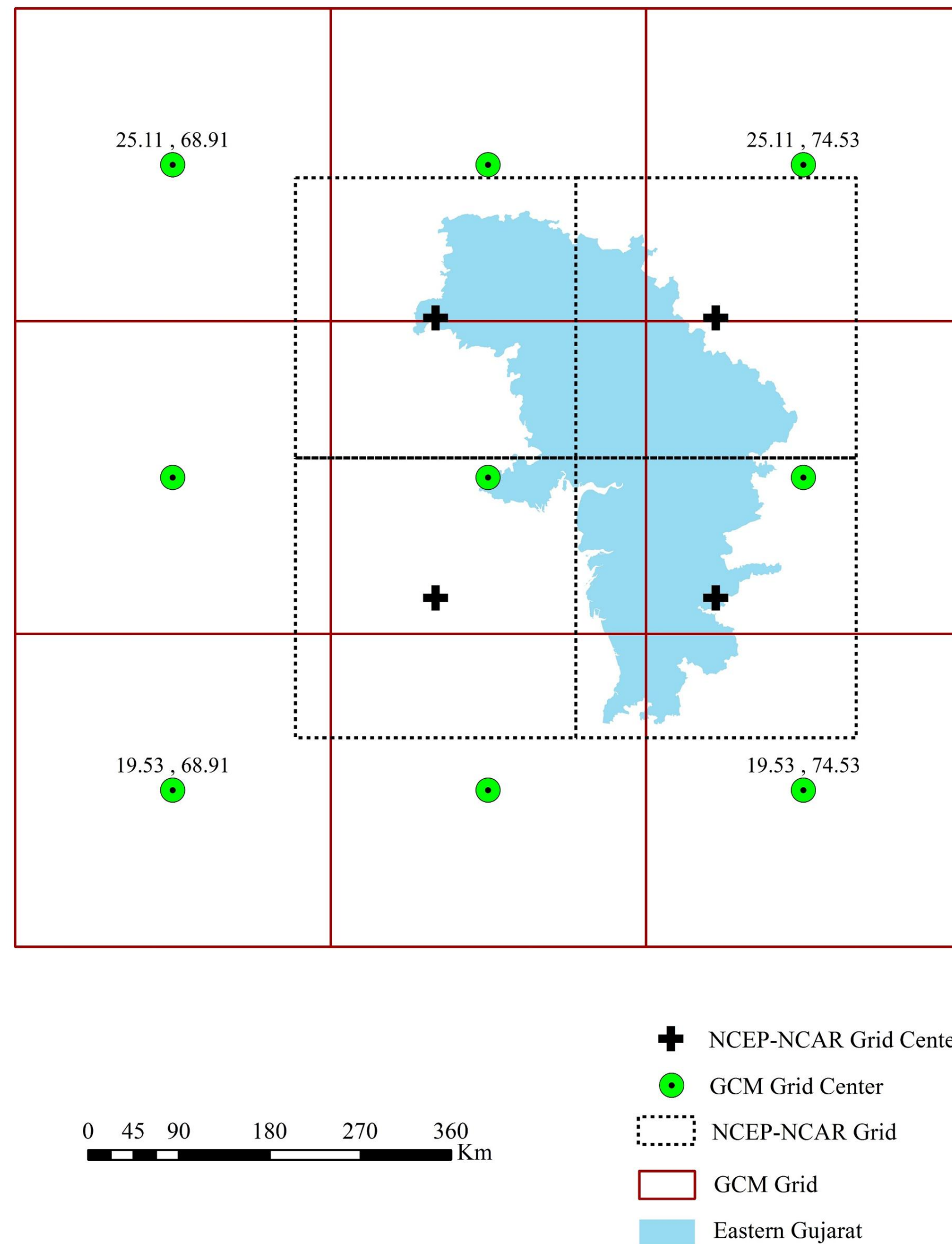


FIGURE 3 The NCEP-NCAR and the GCM grids overlaid on the study area

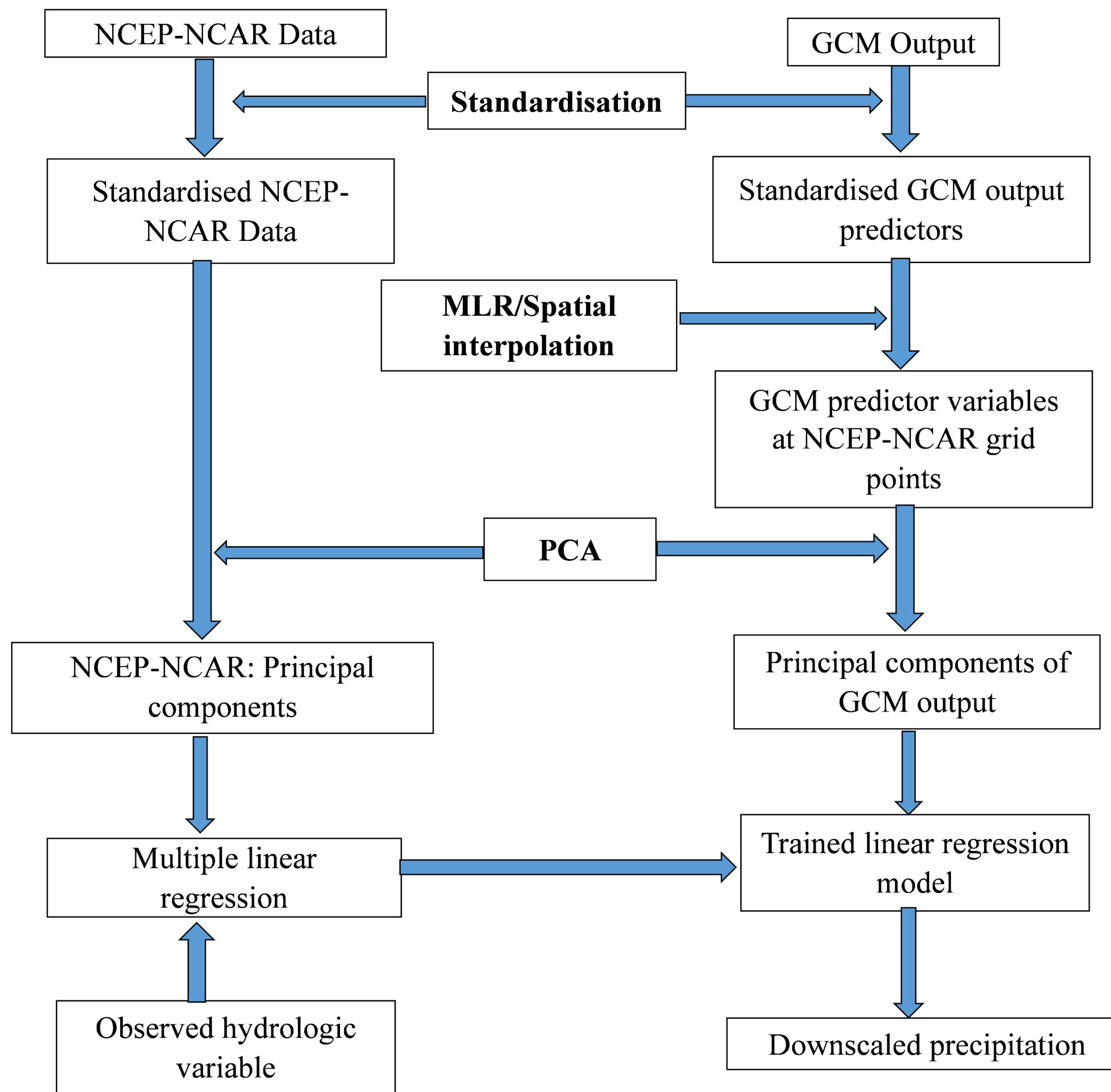


FIGURE 4 Flowchart presenting the techniques followed in the downscaling model establishment

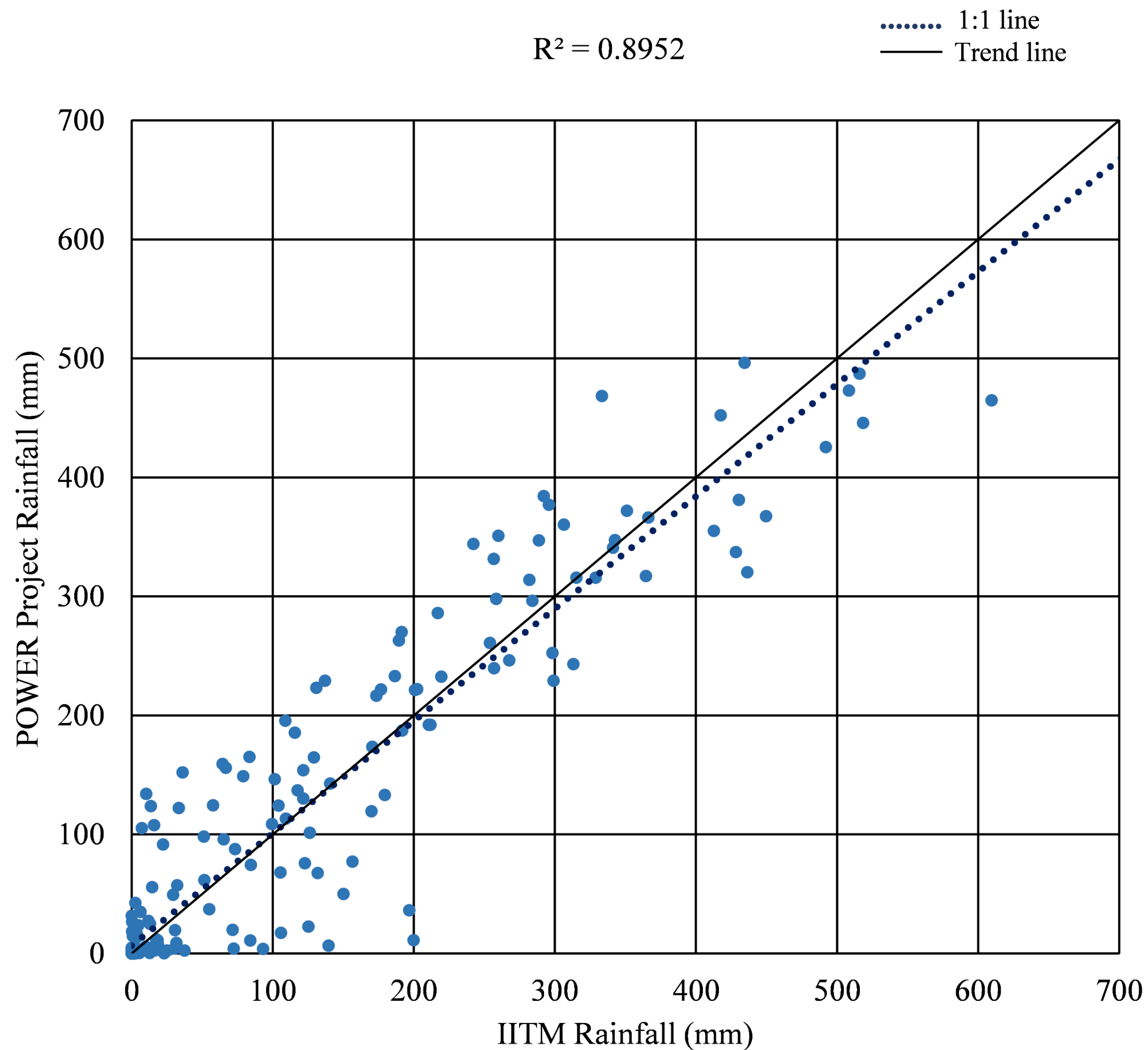


FIGURE 5 Scatter plot of IITM and the POEWR project rainfall data for period 1982-2006

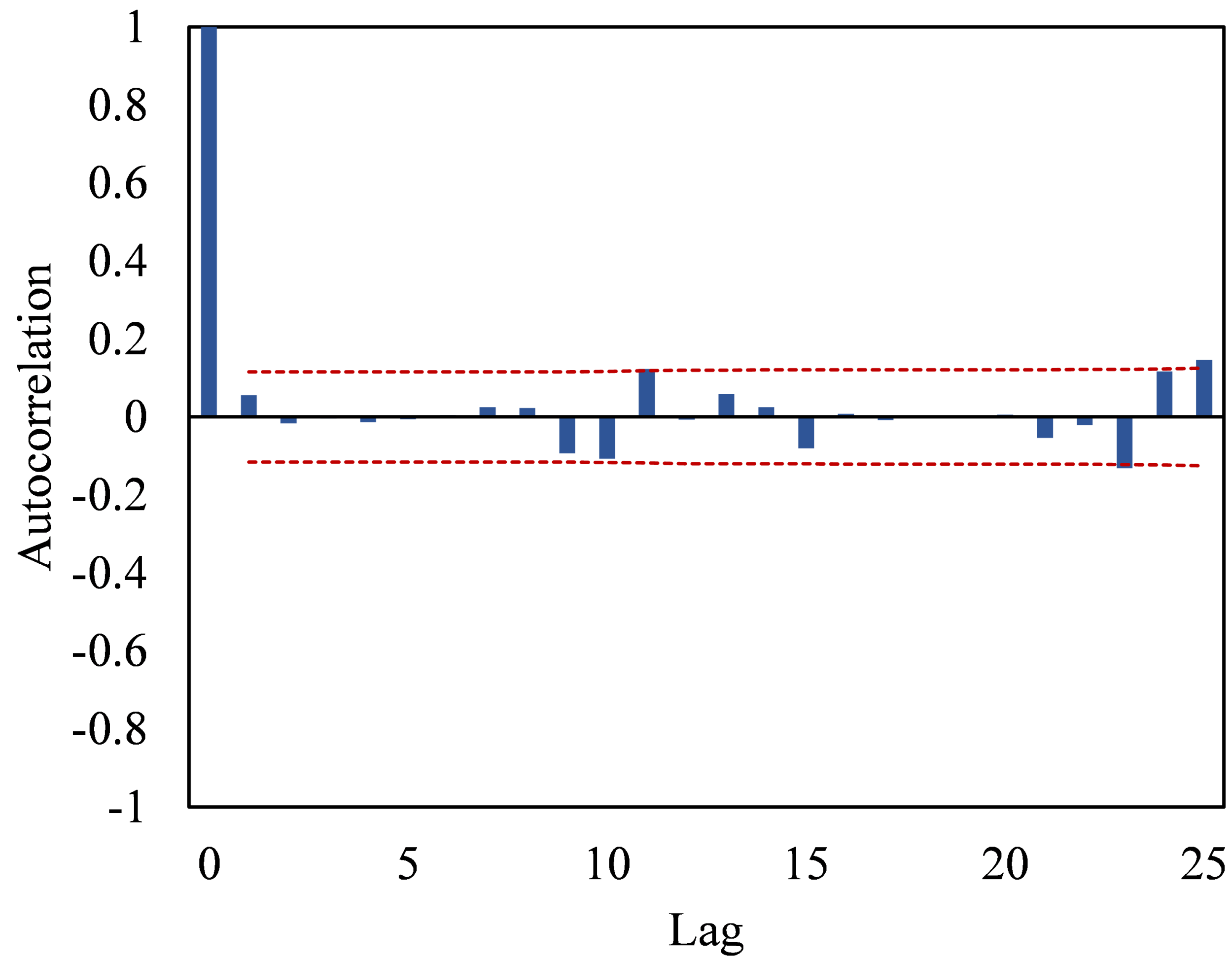


FIGURE 6 (a) ACF plot of residuals of the IITM and the POWER project monthly rainfall

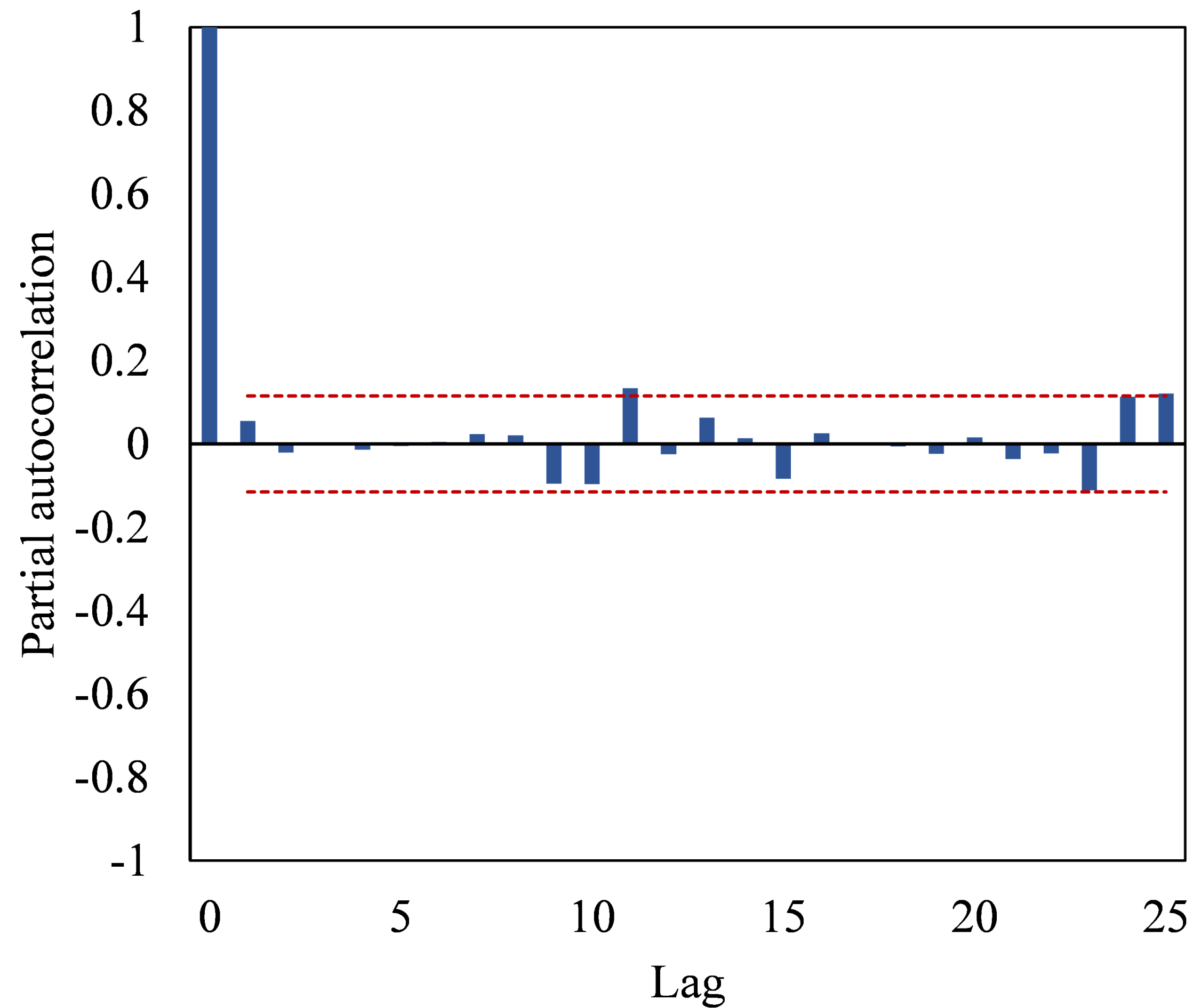


FIGURE 6 (b) PACF plot of residuals of the IITM and the POWER project monthly rainfall

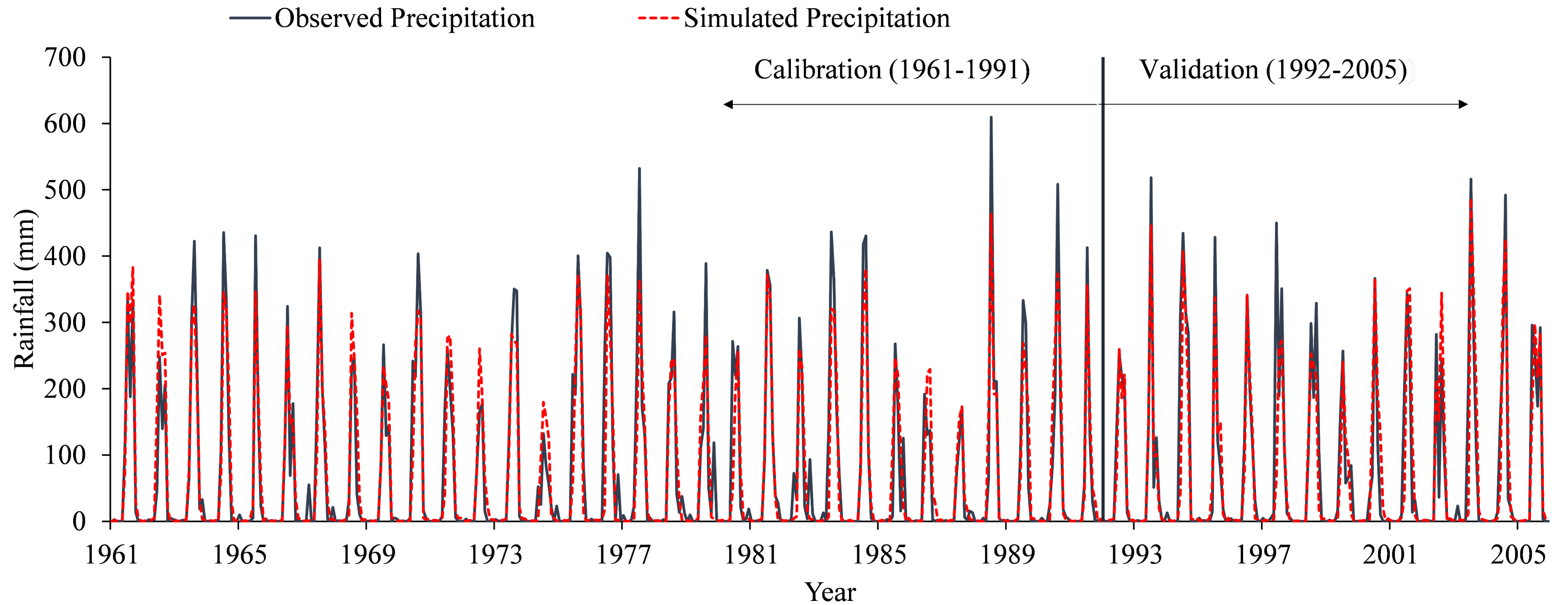


FIGURE 7 Observed and predicted monthly precipitation for calibration and validation periods

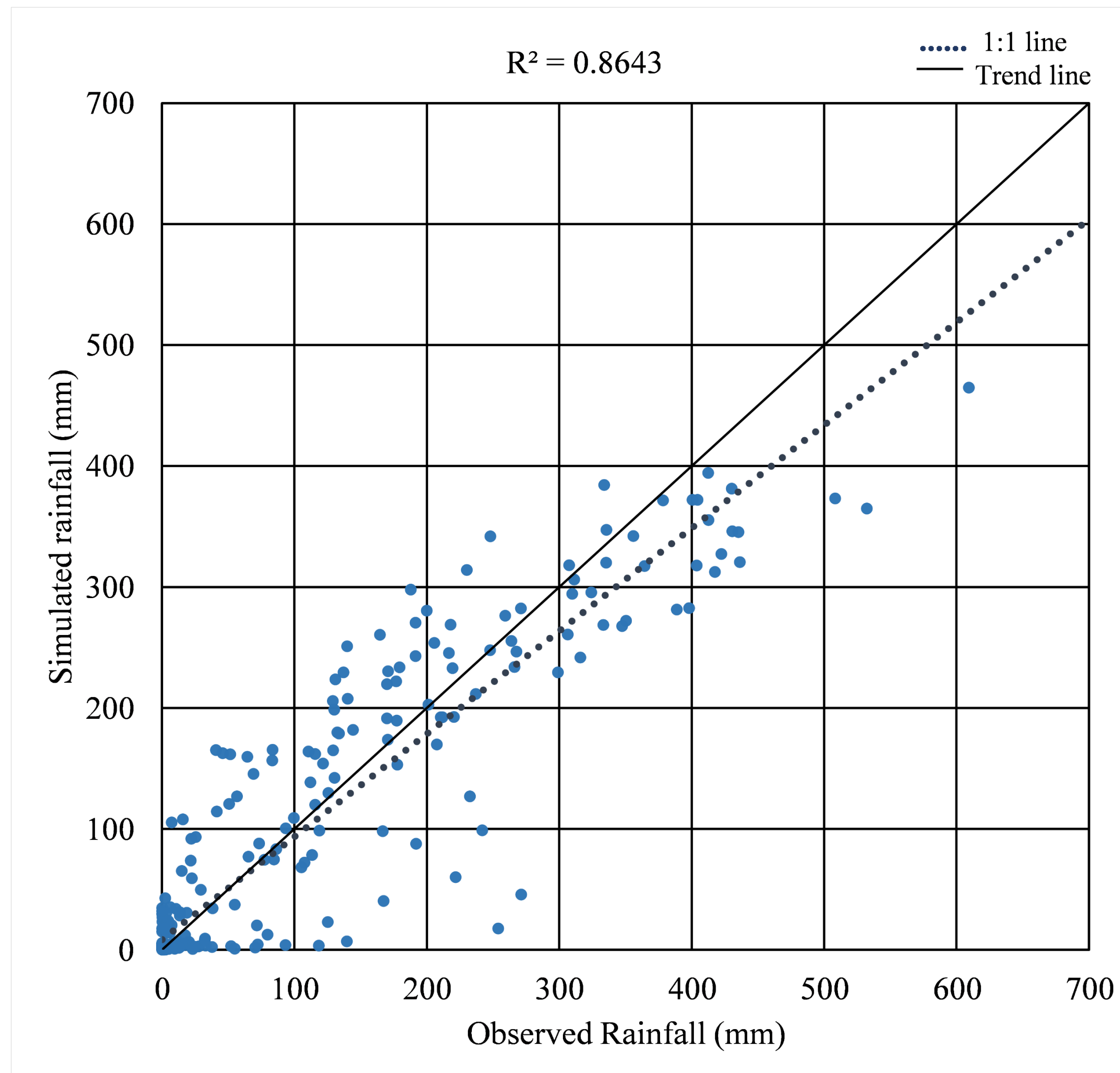


FIGURE 8 (a) Scatter plots of observed and simulated monthly precipitation for calibration (1961-1991)

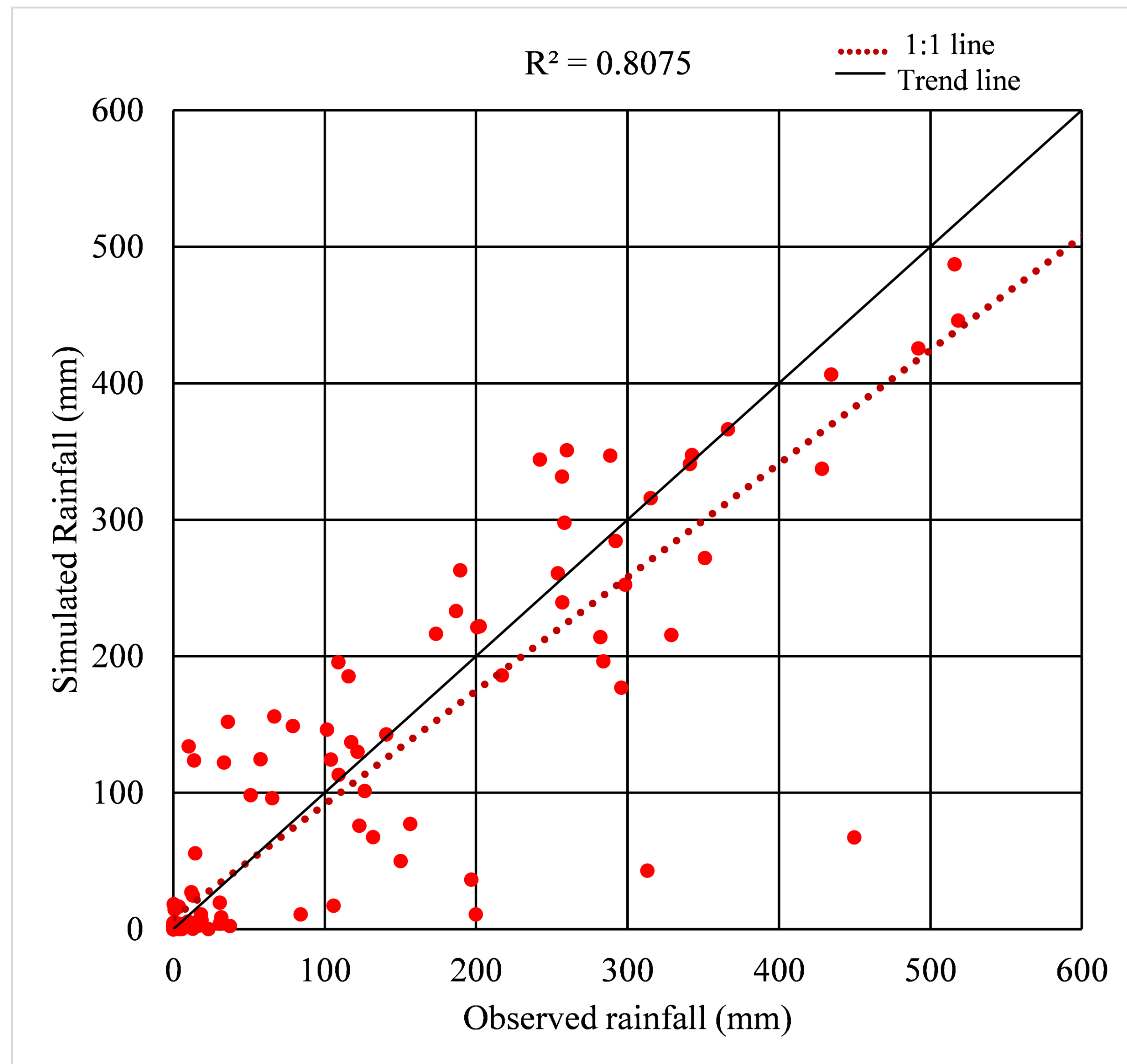


FIGURE 8 (b) Scatter plots of observed and simulated monthly precipitation for validation (1992-2005)

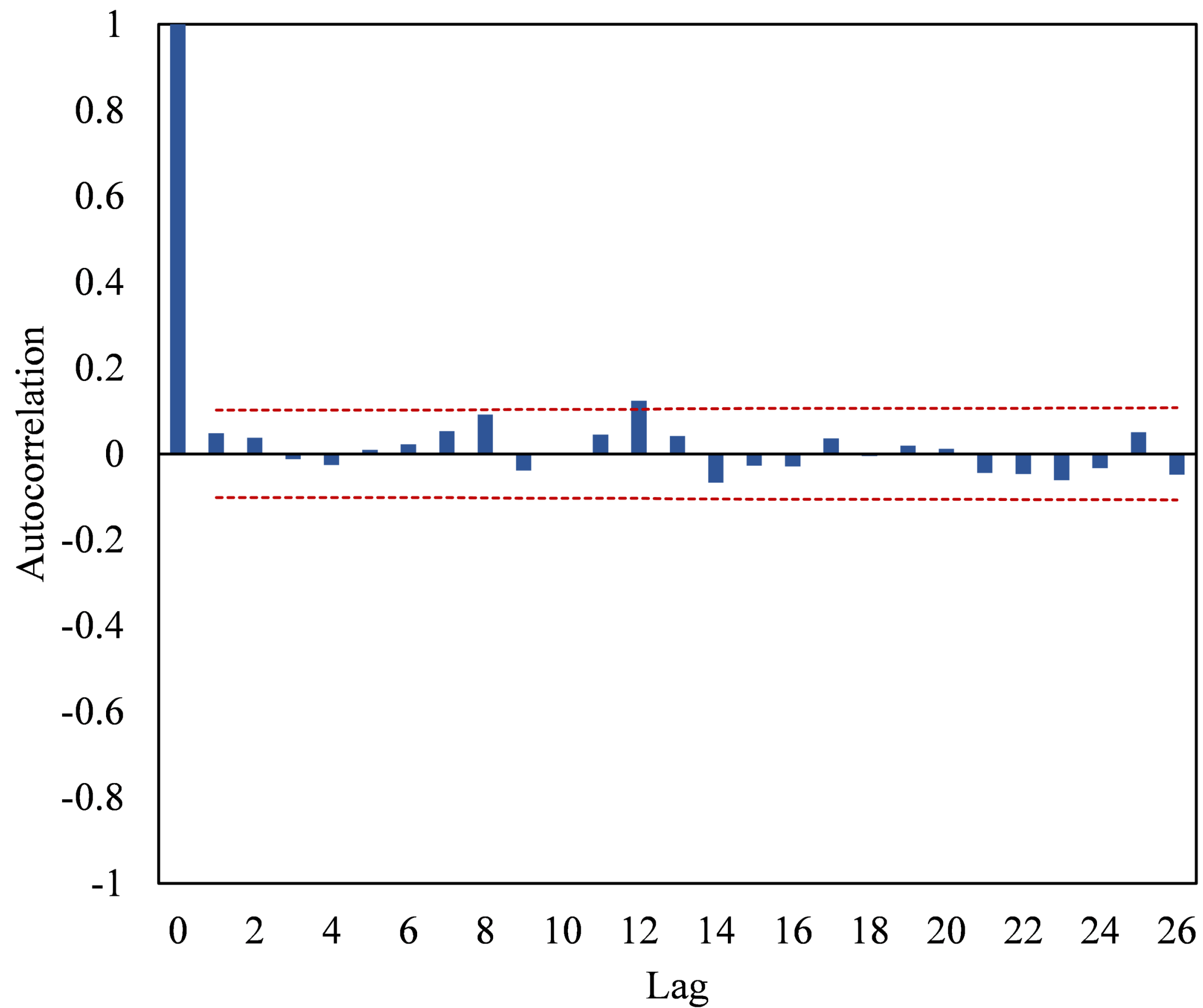


FIGURE 9 (a) ACF plot of downscaling model residual for calibration (1961-1991)

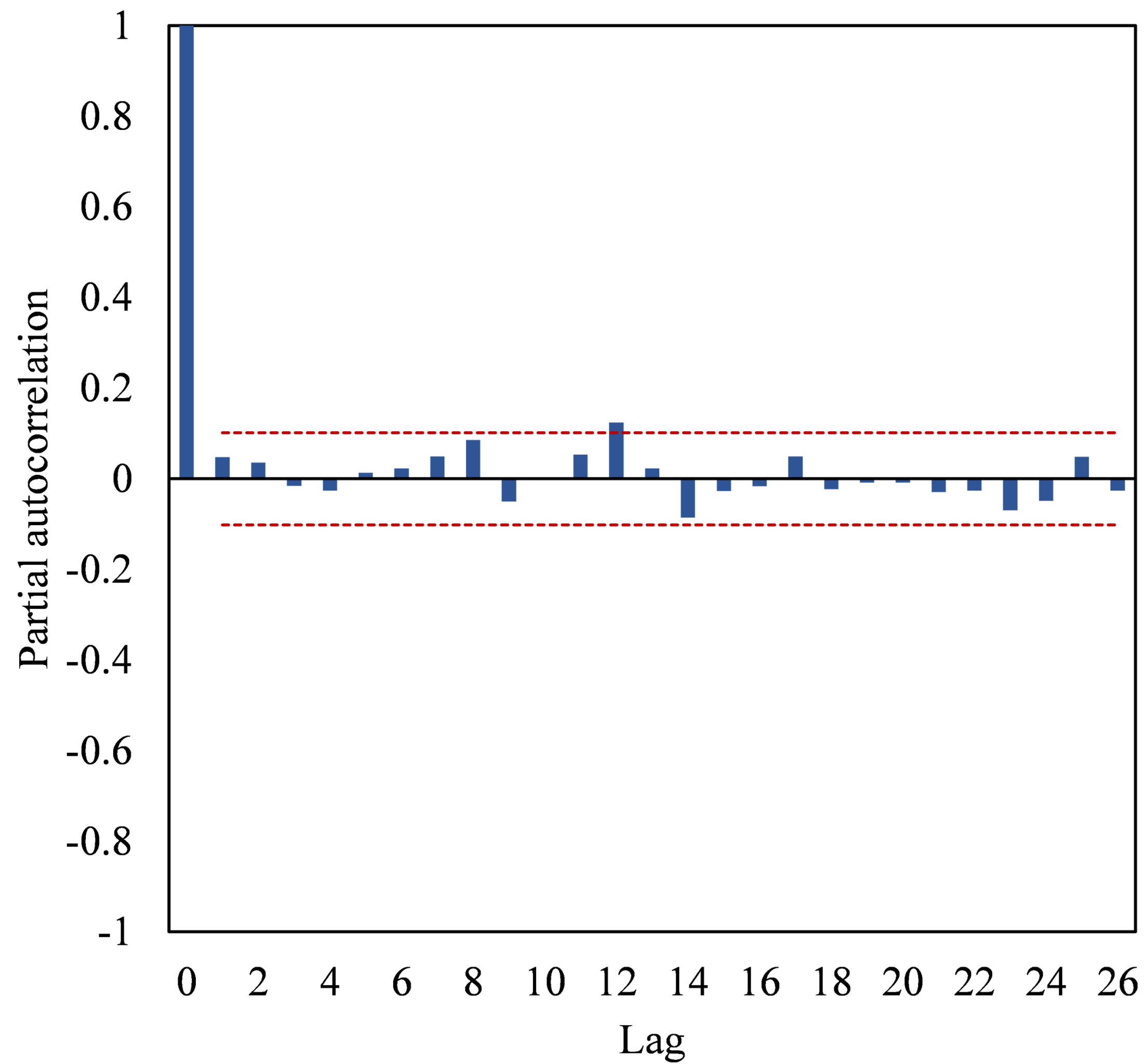


FIGURE 9 (b) PACF plot of downscaling model residual for calibration (1961-1991)

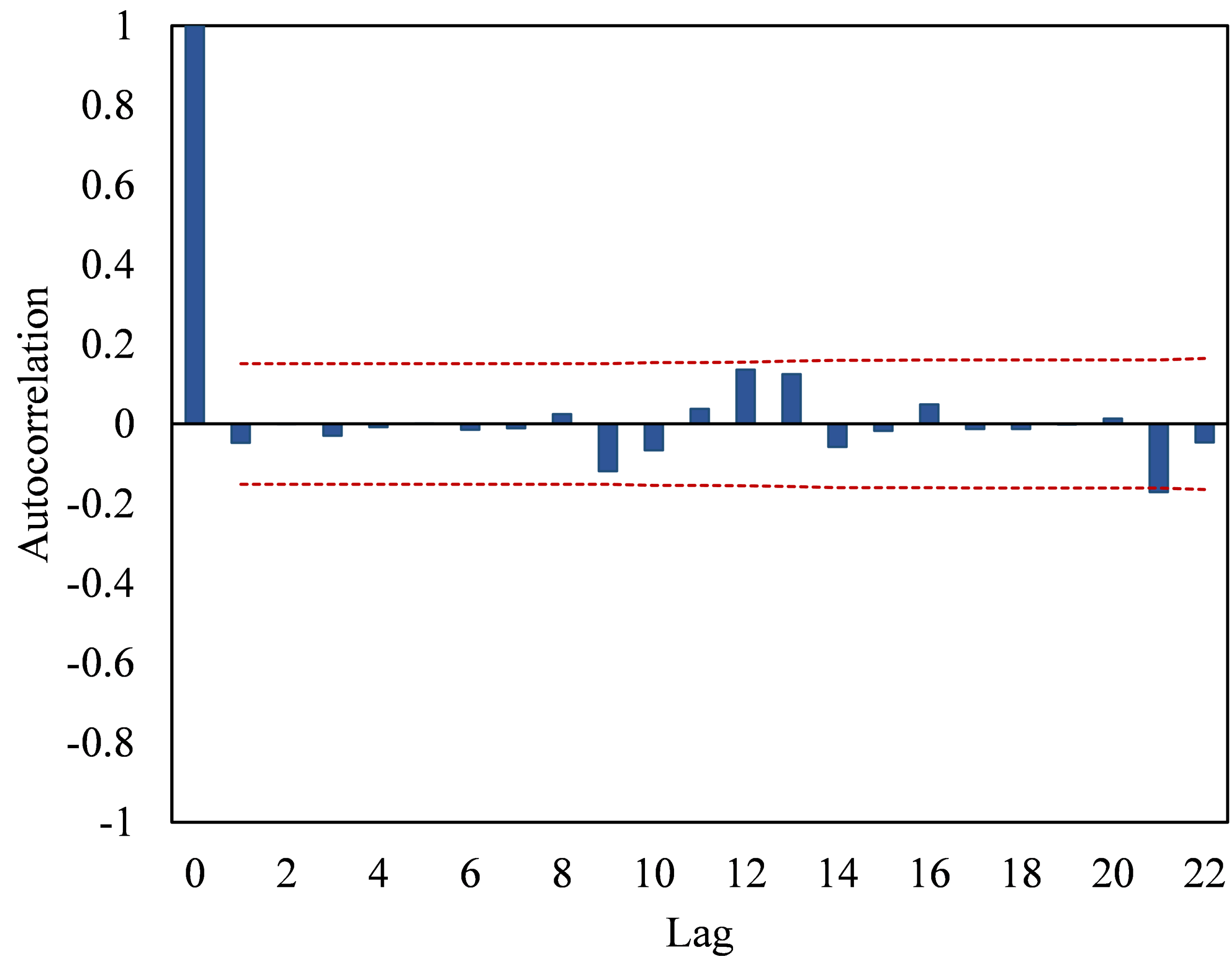


FIGURE 9 (c) ACF plot of downscaling model residual for validation (1992-2005)

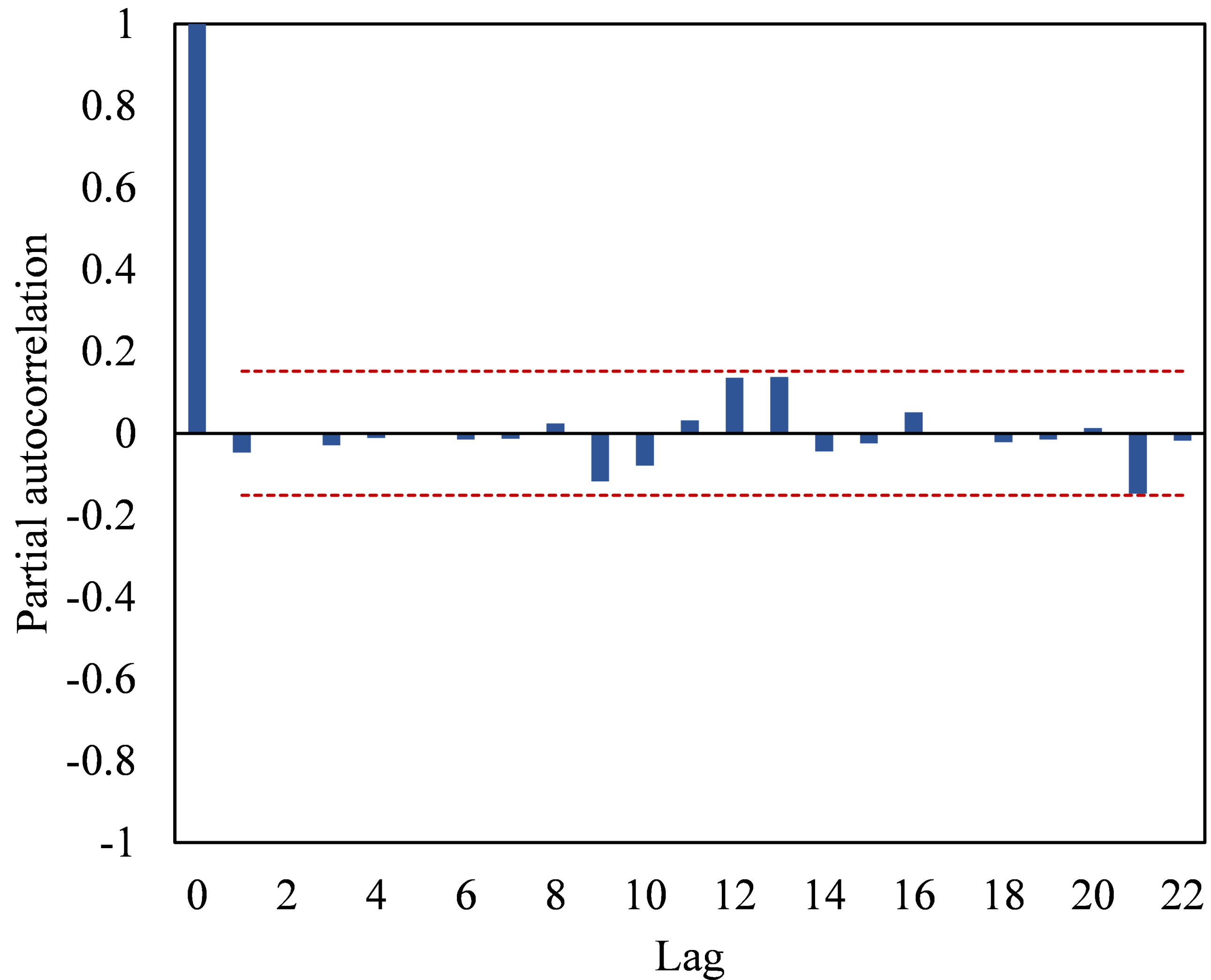


FIGURE 9 (d) PACF plot of downscaling model residual for validation (1992-2005)

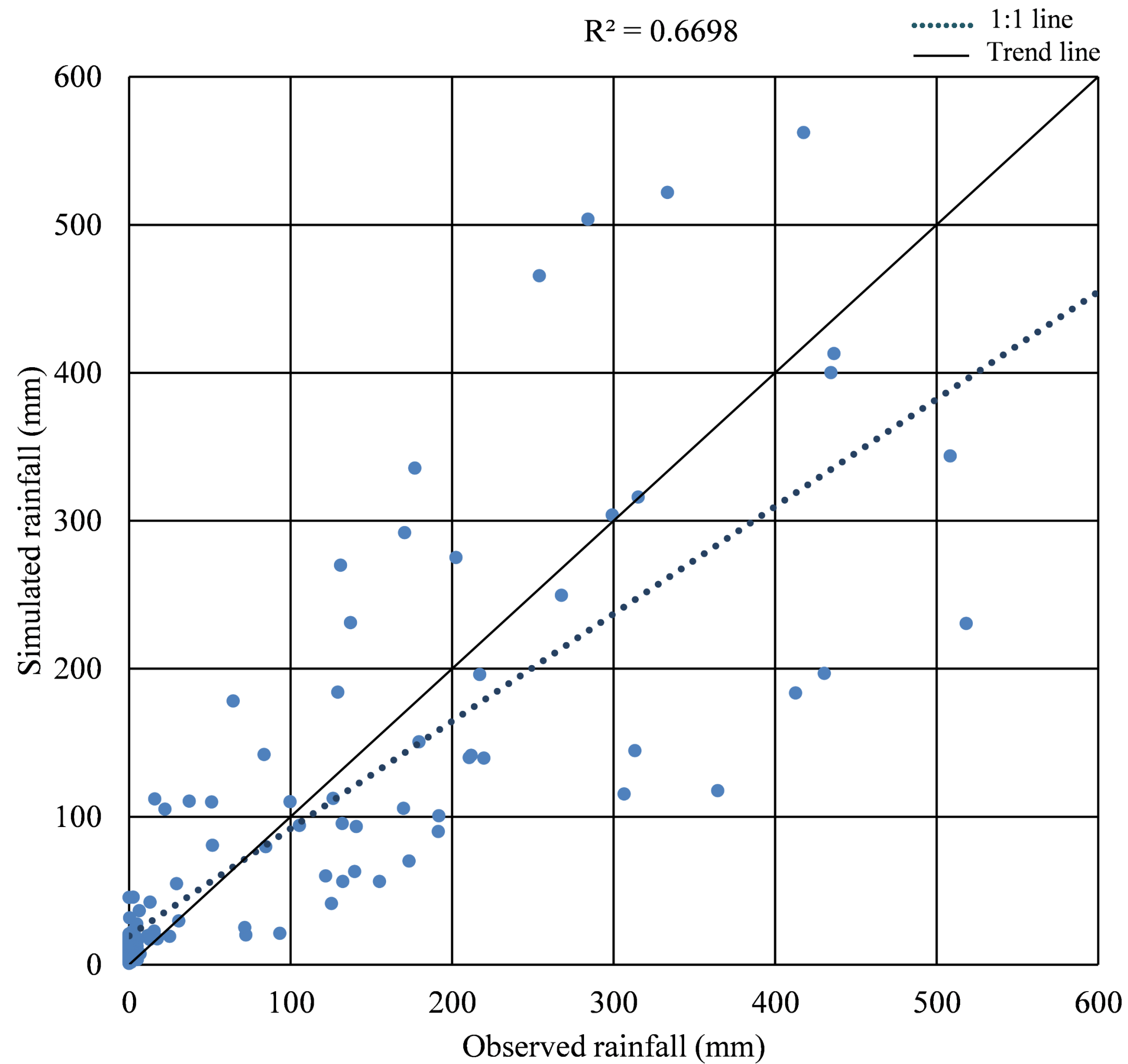


FIGURE 10 (a) Scatter plot of observed and predicted monthly rainfall for RCP2.6 scenario

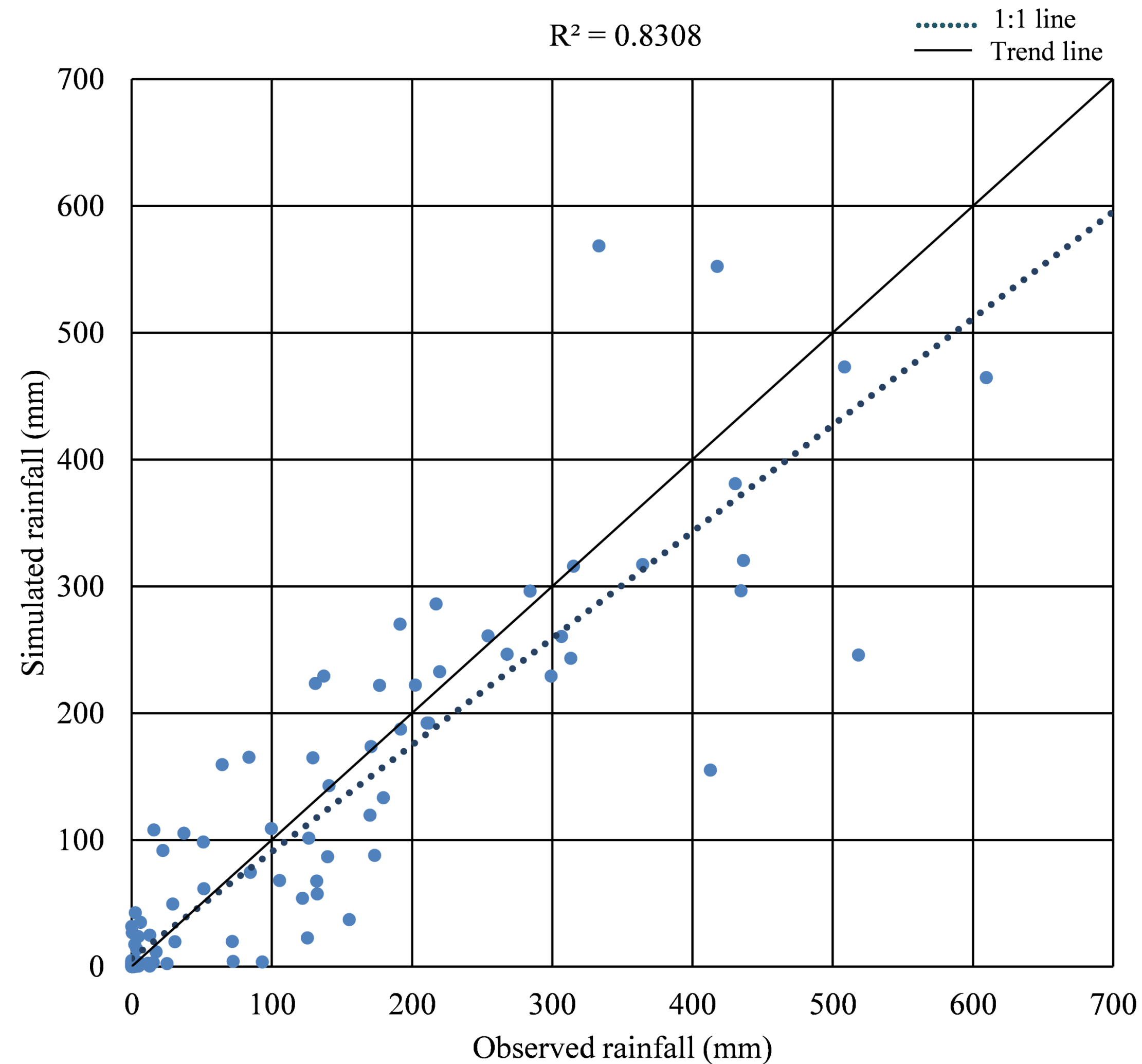


FIGURE 10 (b) Scatter plot of observed and predicted monthly rainfall for RCP4.5 scenario

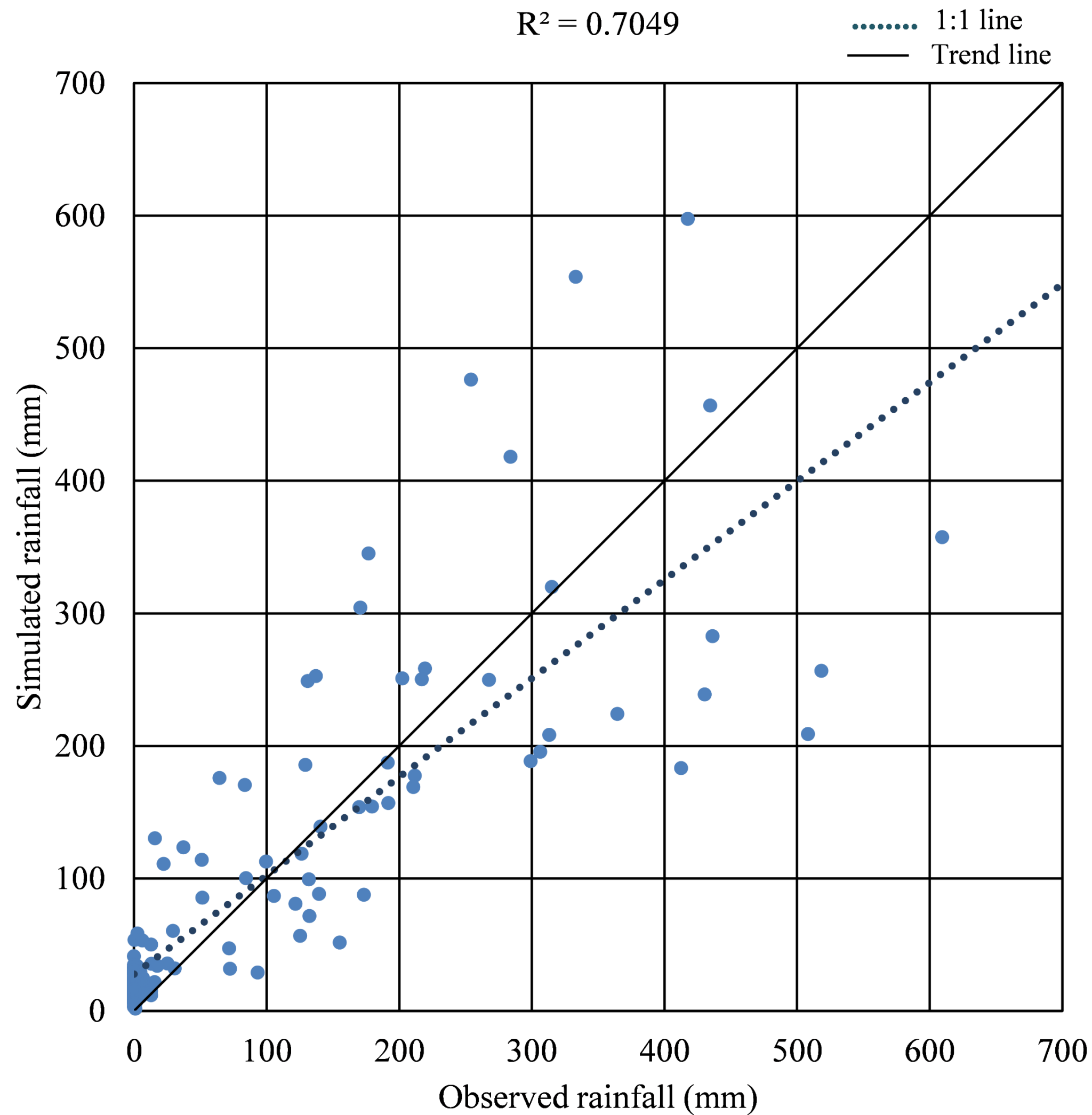


FIGURE 10 (c) Scatter plot of observed and predicted monthly rainfall for RCP8.5 scenario

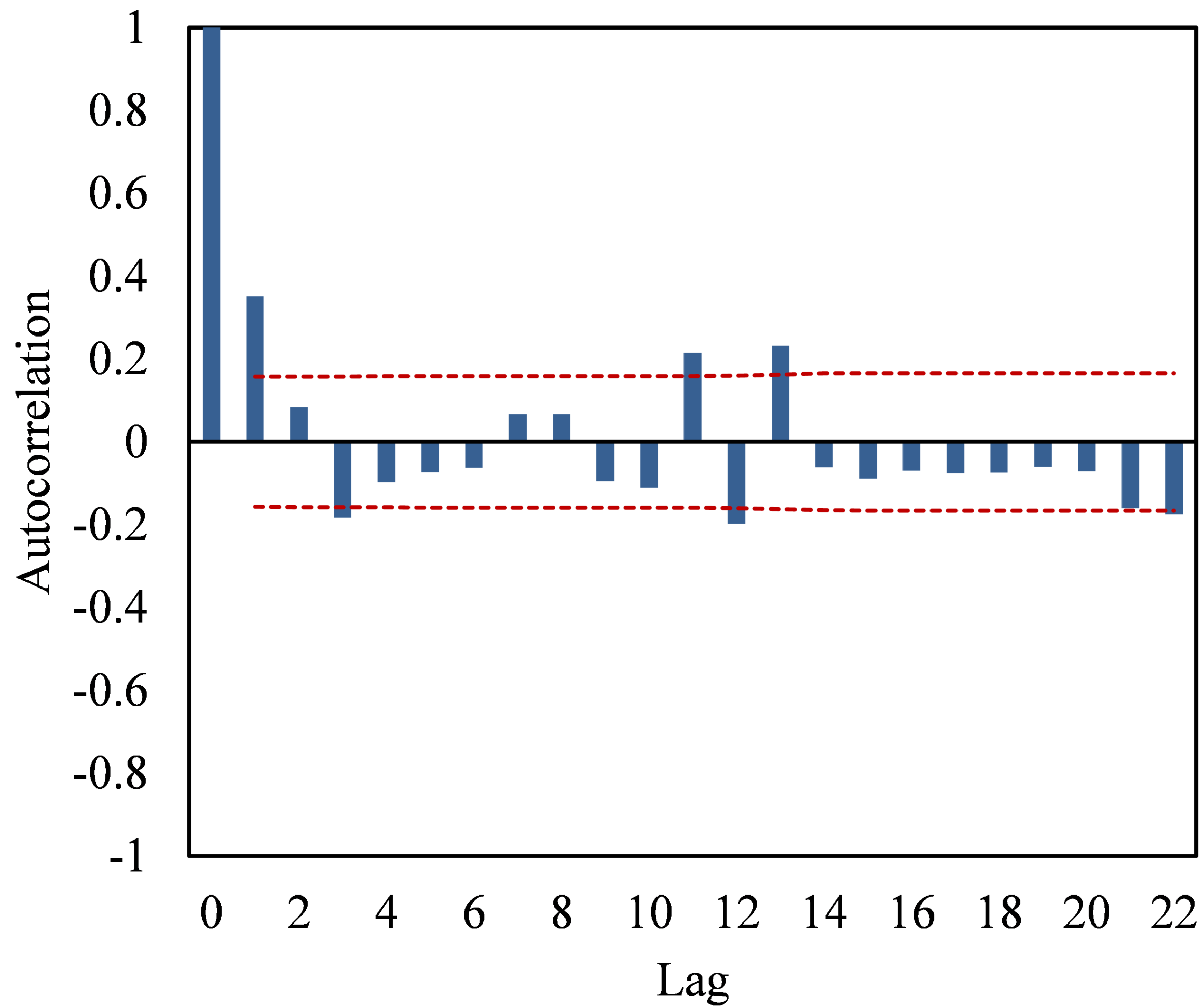


FIGURE 11 (a) ACF plot of model residuals for RCP 2.6 scenario

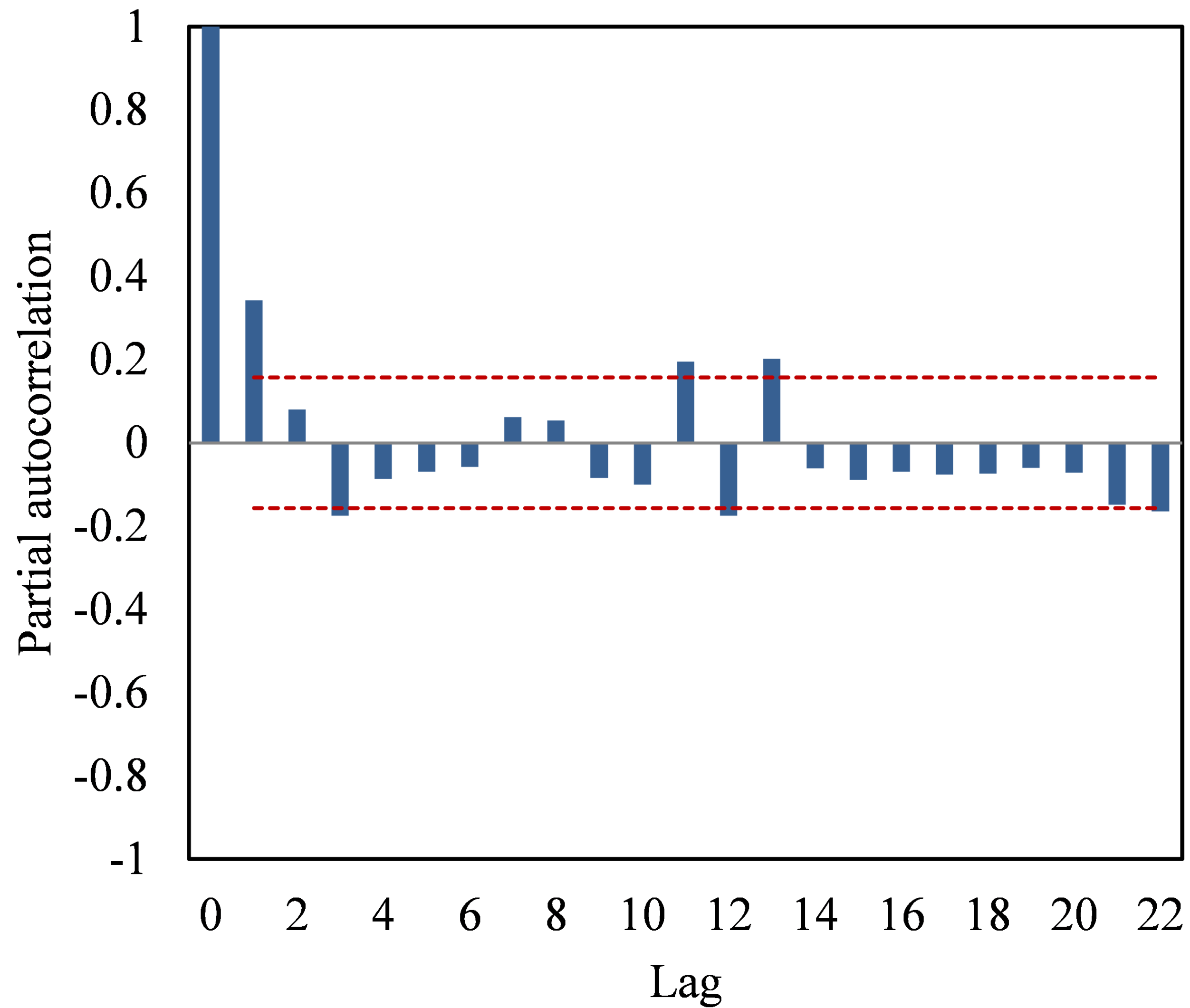


FIGURE 11 (b) PACF plot of model residuals for RCP 2.6 scenario

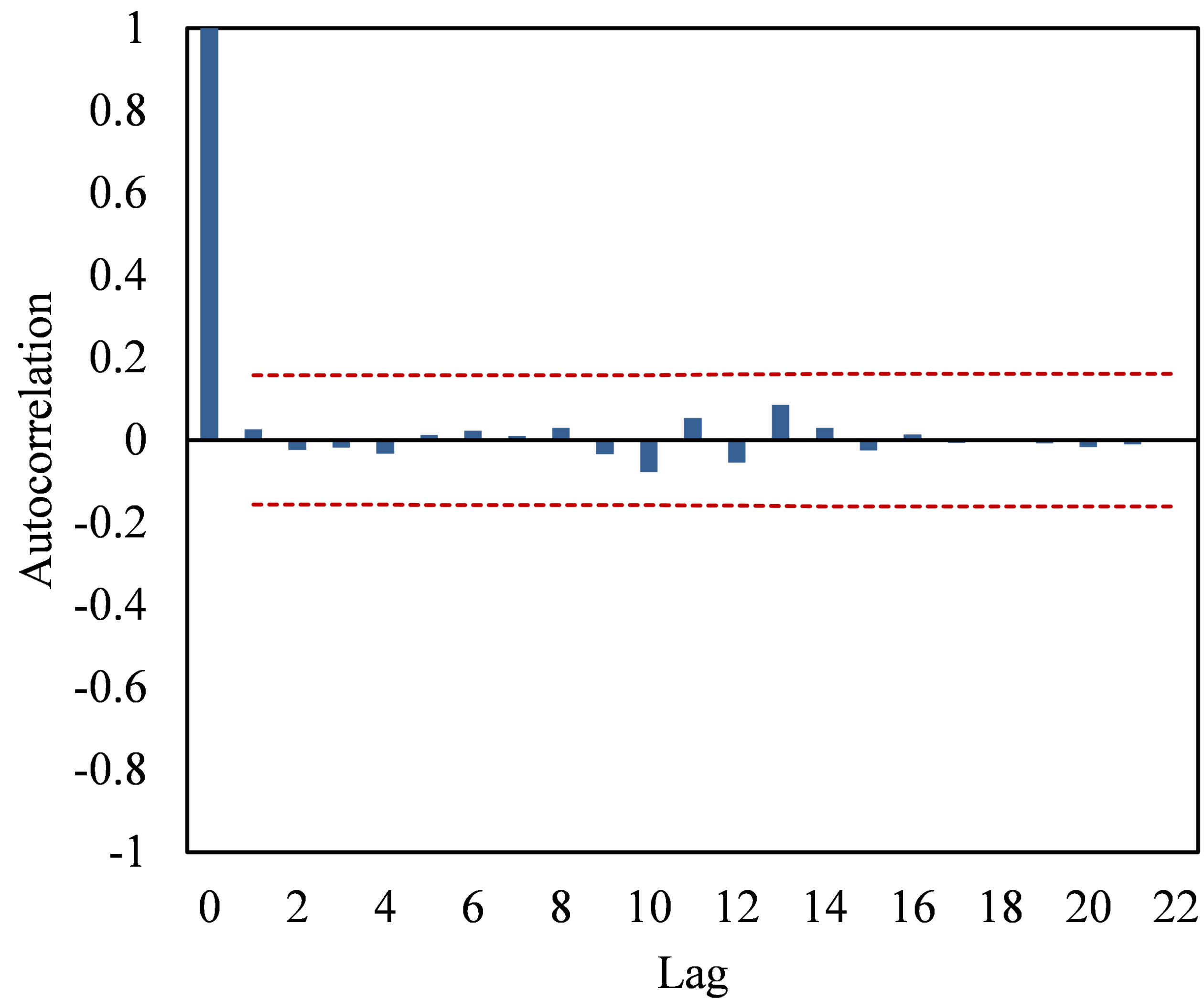


FIGURE 11 (c) ACF plot of model residuals for RCP 4.5 scenario

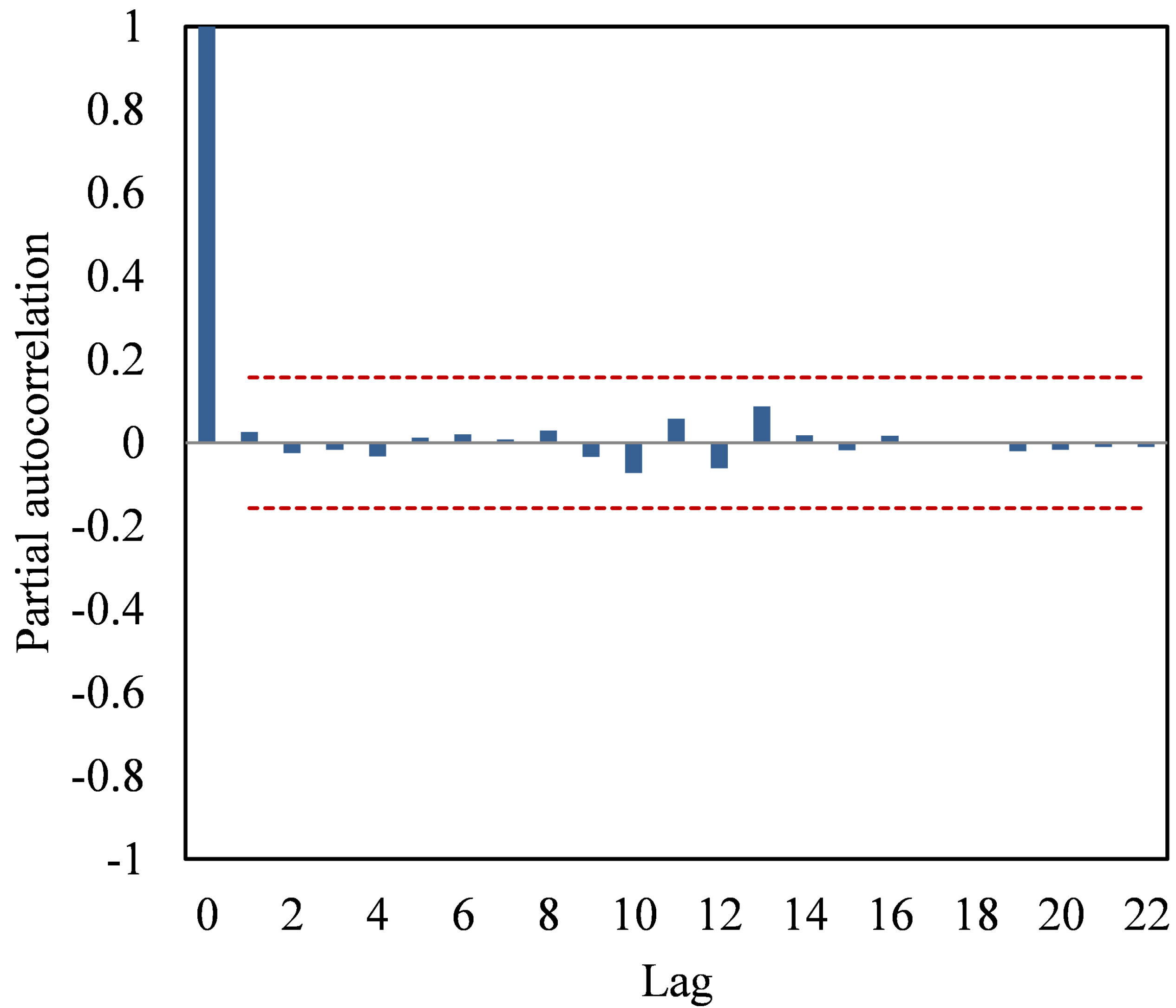


FIGURE 11 (d) PACF plot of model residuals for RCP 4.5 scenario

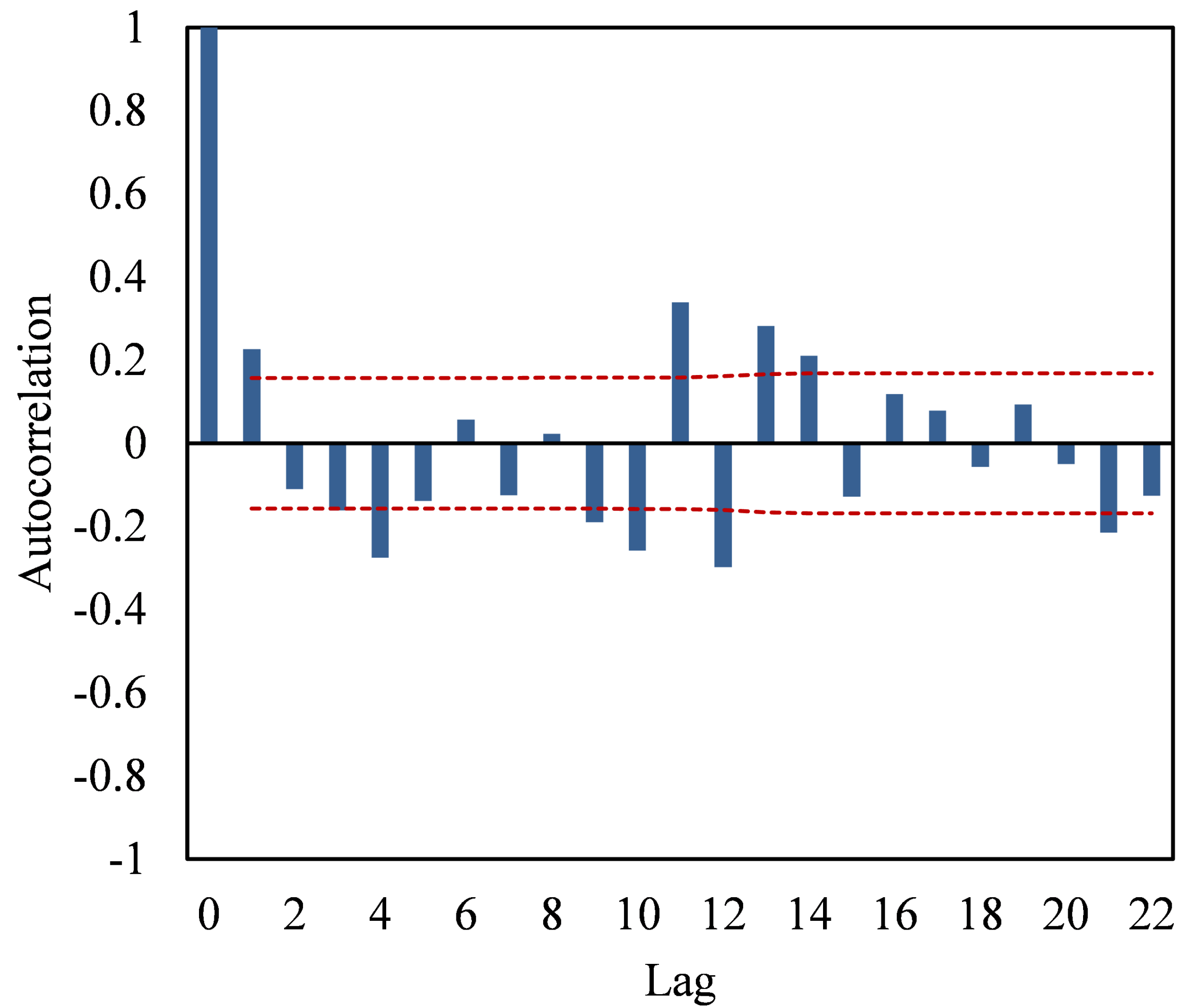


FIGURE 11 (e) ACF plot of model residuals for RCP 8.5 scenario

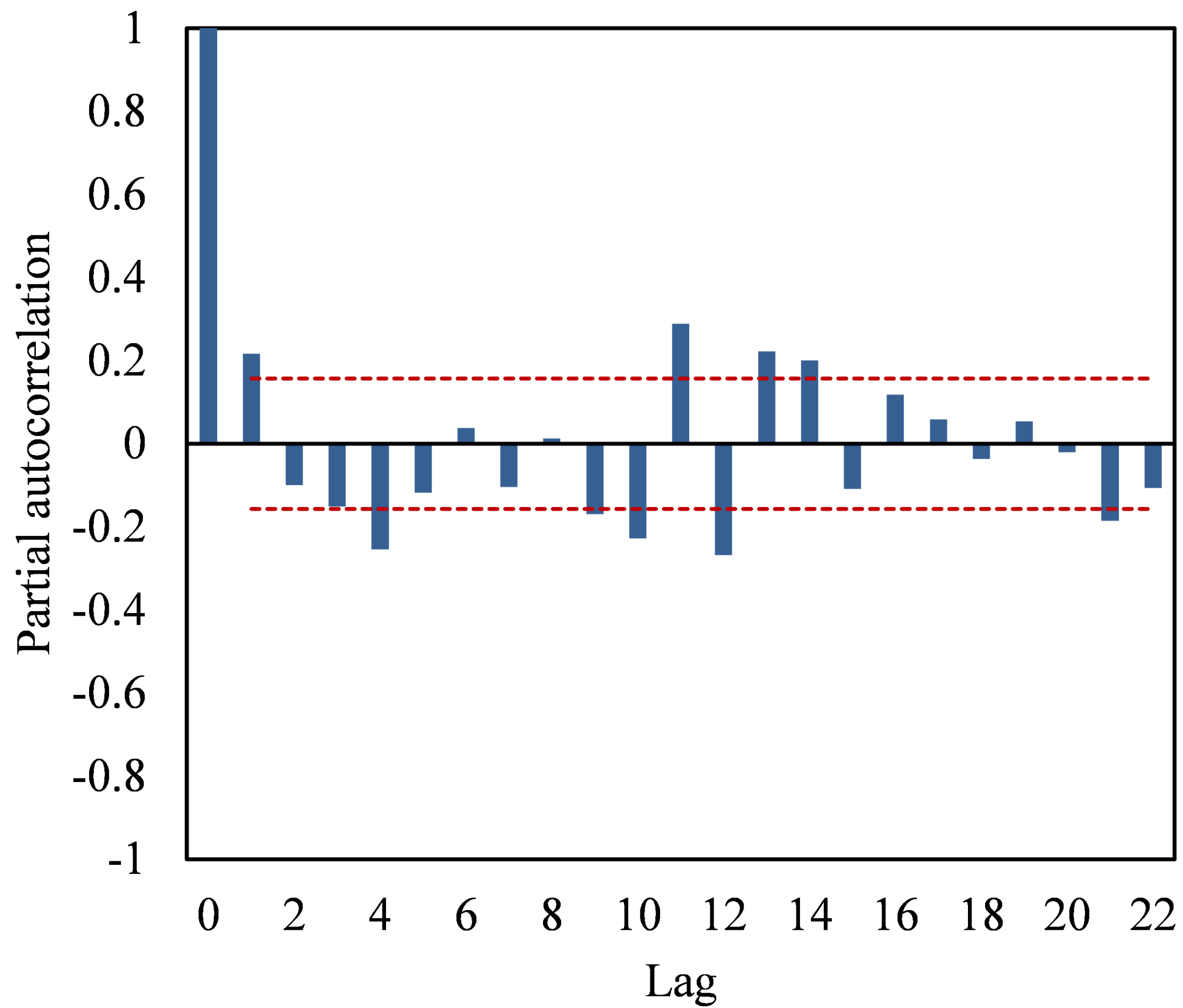


FIGURE 11 (f) PACF plot of model residuals for RCP 8.5 scenario

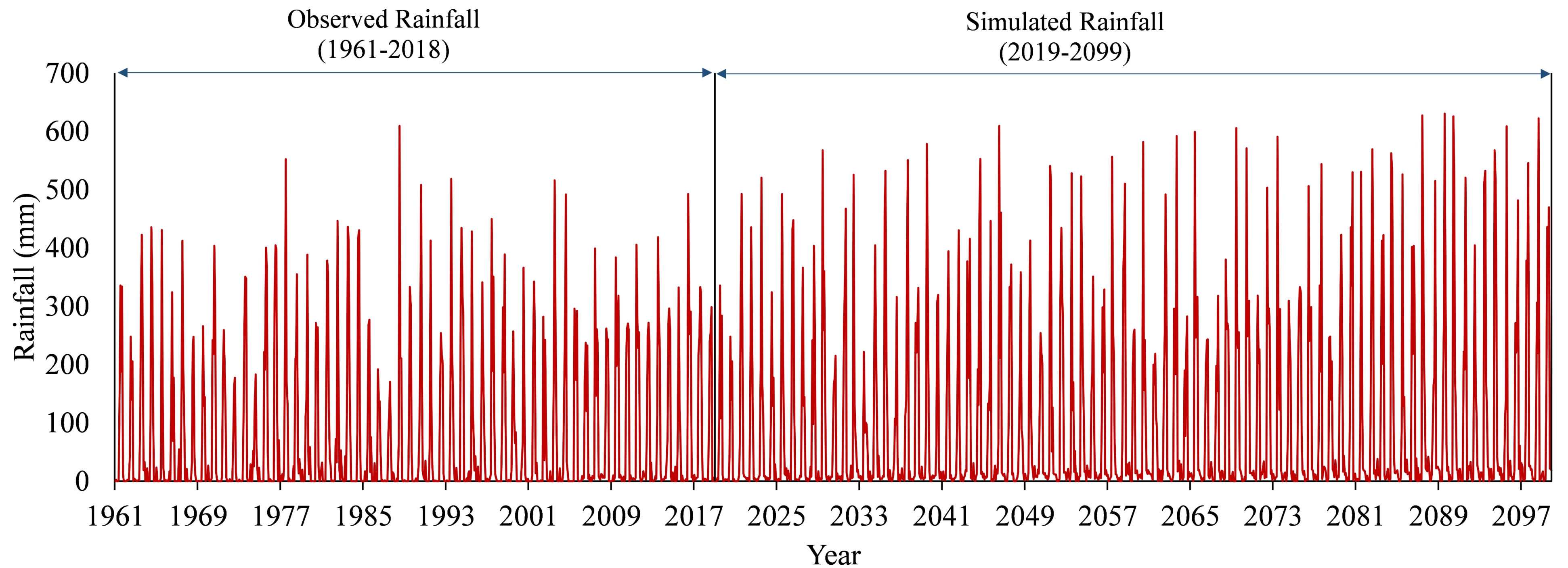


FIGURE 12 Line chart showing the temporal variation of observed rainfall (1961-2018) and predicted rainfall (2019-2099)