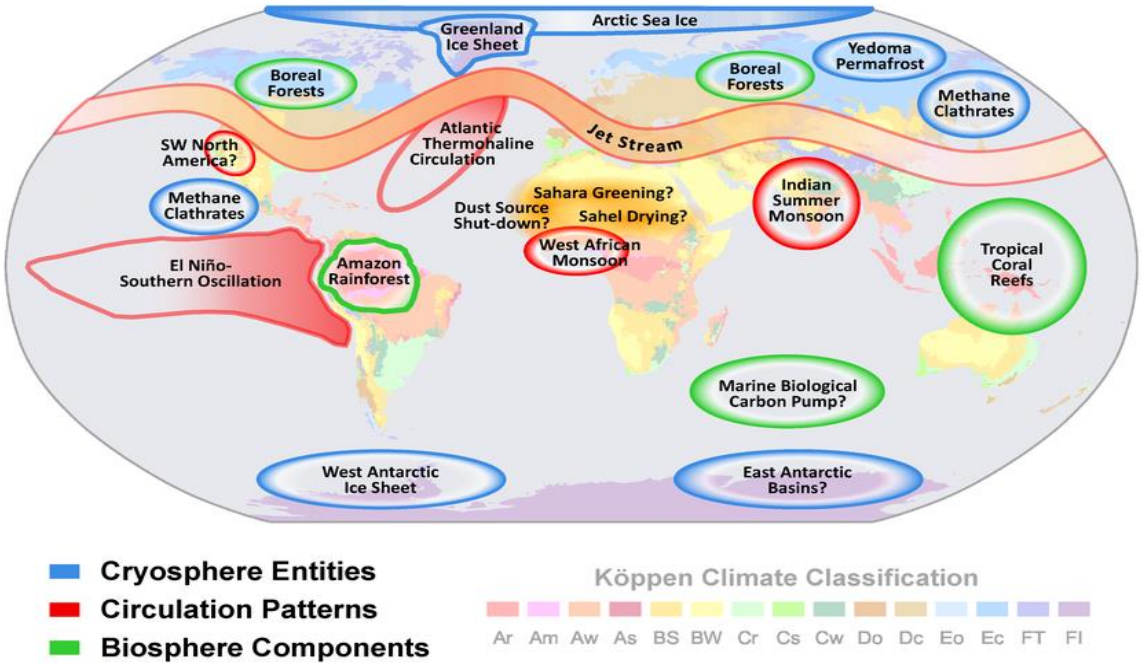
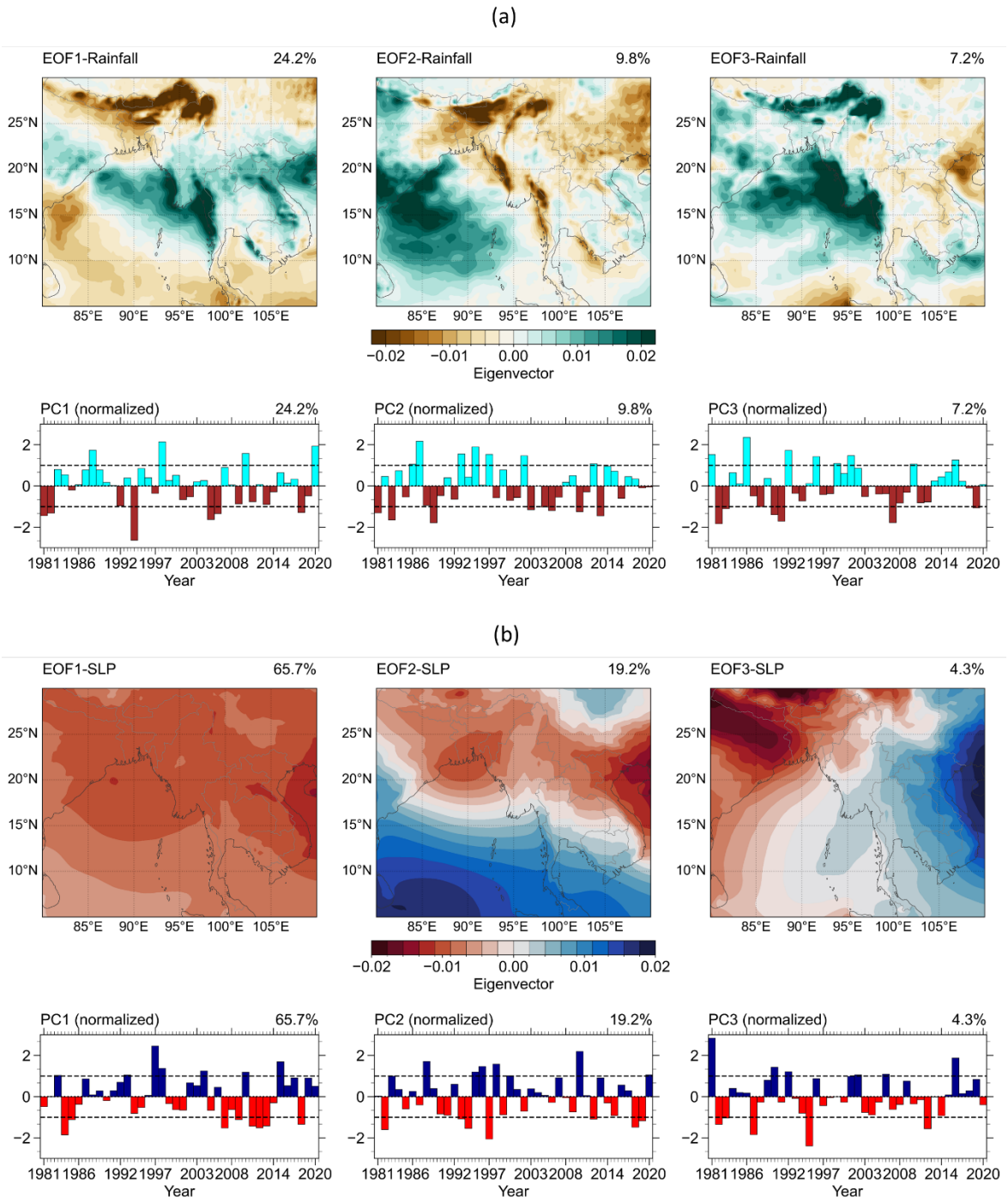
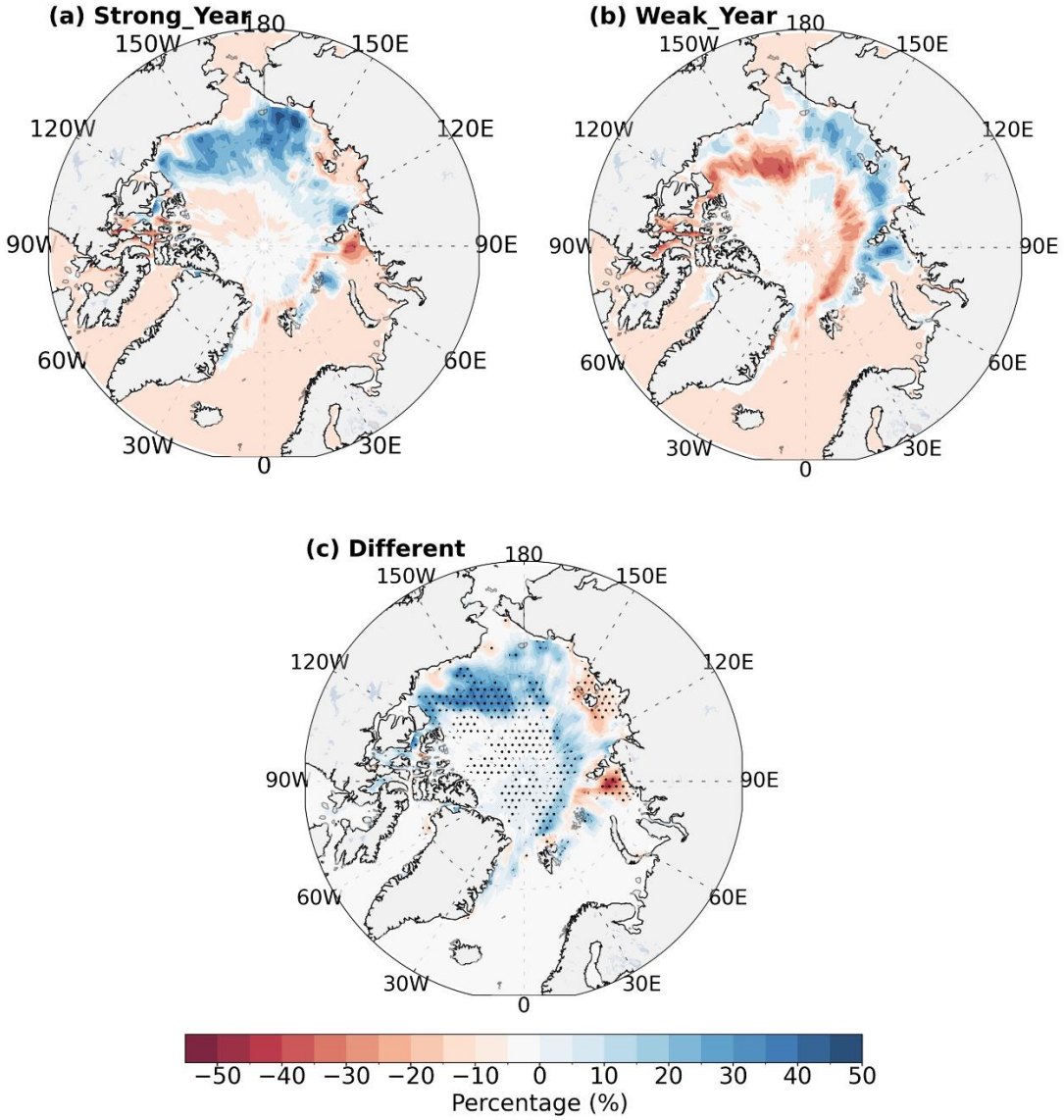
Supplementary



S- 1 Climate Tipping Points of the global circulations.



S- 2 Three dominant EOF modes of (a) JJAS rainfall and (b) Sea level pressure over study area during 1981-2020 with their principal components time series.



S- 3 The mean of Composites anomalous ASI concentration for (a) strong MSWM years (b) weak MSWM years, and (c) the difference between (a,b) with dotted 95% significance level by using Hadlsst dataset.