ThrIndS\_Combined\_ann.xlsx: Seasonal and annual values of r95, r99, r05, r01, prcptot, r95, r99, r20, r10

rx5s\_Combined\_ann.xlsx: Seasonal and annual values of rx5

rx1s\_Combined\_ann.xlsx: Seasonal and annual values of rx1

SDIIS\_Combined\_ann.xlsx: Seasonal and annual values of sdiis

ThrIndS\_tmin\_combined.xlsx: Seasonal and annual values of tmin and fd

csdi\_combined\_ann.xlsx: annual values of CSDI index for each site

tmax\_combined.xlsx: Seasonal and annual values of tmax

CDS\_Combined\_ann.xlsx: Annual CDD and CWD indices

CDD\_CWD\_Combined.xlsx: Seasonal CDD and CWD indices (including both hunter/gatherer/pastoral and agricultural socieites)

CSDI\_Combined.xlsx: Seasonal CSDI indices (including both hunter/gatherer/pastoral and agricultural socieites)

SPSS\_indices.xlsx: cold, wet, dry annual indices organized for SPSS analysis

SPPS\_PCM.xlsx: predictability, constancy, and contingency values for all indices

coef\_var.xlsx: inter and intrannual coefficient of variation

Guide to the Code:

1. Stations.R: Used to create station lists for temperature and precipitation. Uses ghcn\_temp\_stations.csv and ghcn\_precip\_stations.csv to compare to sccs\_stations\_vert.csv to match the ghcn stations to the sccs stations. The SCCS stations are listed vertically to include all the possible nearby stations, with weighting factors and a weighting factor of 2 assigned to those that are “green” – i.e. best match, but not in ghcn1, which are the closest. Output is stations\_temp.out and stations\_precip.out. These files have to be changed by hand in Excel to remove the repetitive stations based on the highest weighting factor to produce final station files, temp\_stations.csv and precip\_stations.csv. The Excel files are stations\_precip.xlsx and stations\_temp.xlsx – the rename and southern hemisphere files are created from these. The ultimate station list comes from sccs\_ghcn\_station\_list\_final\_elev\_sorted\_biome.xlsx.
2. Rename bat files: These are run to change the ghcn station names to the appropriate sccs name.
3. sh R programs: These are run to create separate files for the southern hemisphere sites, while also changing the headings.
4. rprocessing or rprocess R programs: Files with “rprocess” in the name are used to create the annual means that are used to create the SPSS files
5. pcm\_processing.R programs: used to assign the sccs names to the predictability files – files with “output” in the name are the output from these
6. coef\_var\_sccs.R: used to assign sccs names to the coefficient of variation file