getOccurences.R: download occurrence data

getCHELSAData.R: download current and future CHELSA data

prepCurrentCHELSAData.R/  
prepFutureCHELSAData.R: stack, aggregate, crop, convert units for, and project CHELSA data

subsetOccurrences.R: retain species with >=10 unique climate observations, make spatial and project

splitSpecies.R: split subsetted occurrence records by species

buildBuffers.R: construct buffers

runPCA.R: sample predictors from buffers, perform/don’t perform variable correlation filter, run PCA

fitModels.R: fit models

deleteModels.R: delete models for species with missing models

cvModels.R: cross-validate models based on environmental blocking

predictSuitability.R: predict suitability maps

calcModStats.R: calculates thresholds and AUC for models

calcAUCcv.R: calculates AUC for cross-validated models

thresholdMaps.R: threshold suitability maps

getRangeSizes.R: calculates range sizes

collateRangeSizes.R: combines all range sizes in single file

calcRangeChanges.R: calculates range changes

analyzeRangeChanges.R: plot and analyze range change statistics, perform regression on model settings

**rangeChangeCovariates.R: regress projected range change on several ecological covariates**

uncertaintyRangeChanges.R: performs uncertainty analysis on range changes

getCentroids.R: get range centroids

**createDiversityMaps.R: creates diversity maps**

**summarizeRichnessMaps.R: creates summary maps**

**uncertaintyRichnessMaps.R: performs uncertainty analysis on richness maps**

**plotRichnessMaps.R: create publication figures and perform additional analyses**

**diversityIUCN.R: creates expert map of cactus richness**

**BOLD: REPEATED/EDITED (\_REANALYSIS) FOR MANUSCRIPT REVISIONS**