Filename: Dataset_M2_ModelTransferability.zip

Description:

This ZIP archive contains datasets, scripts, and documentation related to the manuscript "Transferability of stream benthic macroinvertebrate distribution models to drought-related conditions". The contents include .csv files, geospatial data (.gpkg, .tif), R scripts, a README document for the Fulldataset, and other supporting files necessary for the successful implementation of species distribution models (SDMs), including model evaluation and data analysis.

Contents:

1. Documentation & Scripts

FullDatasetREADME.docx – Documentation explaining the dataset "Full_dataset.csv" contents, usage and sources.

Functions.R – R script containing functions for data processing and analysis.

2. Data Files

channel_sd_day.txt – Large text file containing time-series of flow in the Kinzig obtained from a SWAT+ model, the ile is needed for the processing of Indices of Hydrological Alterations (IHAs). See citation in Supporting Information of the publication.

CorMdls.RData – RData file containing all the possible combinations of up to three spatial models for Spatial Stream Network (SSN) models.

Knames.rds – R dataset storing the names of the species to run SDMs

data_eval.csv – Evaluation dataset used for model assessing model transferability, containing records from 2017-2021.

data_train.csv – Training dataset for model development and internal validation, containing records up to 2016.

Full_dataset.csv – Complete dataset combining training and evaluation data.

3. Geospatial Data

Kinzig_filled.tif – Geospatial raster file containing a filled digital elevation model for the Kinzig, needed for the delineation of .ssn files used in for SSN models

Kinzig_IHAPoints.gpkg – GeoPackage file with points to delineate upstream catchment areas to calculate IHAs

Kinzig_loc.gpkg – GeoPackage file with centroids for each stream segment in the stream network.

Kinzig_occurrences.csv – CSV file with occurrence records for species, duplicate of Full_dataset .csv

Kinzig_PA_evaluation.gpkg – GeoPackage file with locations of the records corresponding to data_eval.csv

Kinzig_PA_train.gpkg – GeoPackage file with locations of the records corresponding to data_train.csv

NNZART_2016.tif – Raster file containing the landuse of the Kinzig during the year 2016

rivs1.gpkg – GeoPackage file representing river network data.

Total Files: 16

Formats: CSV, TXT, RData, RDS, R, DOCX, TIF, GPKG

Size: Approx. 1.78 GB (decompressed) and 0.3 GB (compressed)

Created By: Graciela Medina Madariaga

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