



European Vegetation Archive

Data Request Form



To obtain data from the European Vegetation Archive (EVA), including the ReSurveyEurope Database, please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data that meet your needs are available. If they are, please fill in the form below and submit it to Ilona or another member of the EVA Coordinating Board (or ReSurveyEurope Board if you ask for data from the ReSurveyEurope Database).

- Applicant's name:

María Ángeles Pérez Navarro

- Applicant's institutional address:

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- Applicant's e-mail:

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- Project title:

Bridging CLImatic disequilibrium and Functional TRAits to explain Plant responses to climate change (CLIFTRAP)

- Are you asking for core EVA data (non-repeated vegetation surveys) or for ReSurveyEurope data (repeated vegetation surveys)?

EVA core data

- Brief description of the aims and methods of the study:

The study is part of the CLIFTRAP project, which will deepen the understanding of the linkage between the functional properties of plant species and communities and their climatic requirements. Specifically, in this study we will address the relationship between trait diversity and coordination and species and communities' lags to track climate change.

Ongoing climate change is increasing global temperature and altering precipitation regimes at an unprecedented rate, challenging species capacity to keep up with their environment. Despite the growing evidence of plant species shifting upslope and poleward developing acclimation (e.g., by changes in phenology) or genetically adapting to new climatic conditions, plant species responses to changes in climate are rarely synchronic or immediate, thus leading to a potential mismatch between the species climatic requirements and the climatic conditions of the sites where they occur. This mismatch is also known as "climatic disequilibrium" and its study has gained attention in recent years (1-4). In most of the cases the mismatch is associated to species' insufficient velocity to track climate change, thus implying species future local

extirpation, unless they can acclimate or adapt to the new conditions. These species farther from equilibrium likely possess poorly adapted functional traits and syndromes leading to low tolerances to the new climatic conditions. Notably, despite the key relevance of climatic disequilibrium to improve climate change forecasts and implement adaption measures, yet it remains to be assessed the link between climatic disequilibrium and functional traits in plant species and communities.

Here, we aim to analyse the relationship between community climatic disequilibrium and functional traits coordination and diversity at regional scale. For this purpose, we will characterize community climatic disequilibrium across European vegetation types by estimating niches of species present in the vegetation plots based on GBIF occurrences for the whole biogeographic range and weighting species niches by species observed cover at plot level. We will also estimate functional trait weighted means at community level and functional trait coordination applying network tools (5). Finally, we will apply statistical models to relate climatic disequilibrium and different functional properties of plant communities.

References:

- (1) Blonder et al. 2015 Ecology 96: 972–985
- (2) Dullinger et al. 2012 Nat Clim Chang 2: 619–622 (11)
- (3) Alexander et al. 2018 Glob Chang Biol 24: 563–579 (12)
- (4) Lenoir et al. 2013 Glob Chang Biol 19: 1470–1481
- (5) He et al. 2020 Trends Ecol Evol 35: 908–918

- Will someone else be involved in data editing or analysis in addition to the applicant?

Francisco Lloret and Enric Batllori (at CREAM and University of Barcelona, respectively)

- Estimated time of delivery of results (e.g., manuscript submission):

Autumn 2027

- Geographic area needed (e.g., countries or range of geographic coordinates):

All countries present in EVA, but Russian and Caucasus countries.

- Do you need plots to be georeferenced? If so, what is the minimum accuracy of plot location (in metres or kilometres) needed for your project?

Yes, we only need georeferenced plots (accuracy up to 10km)

- Vegetation types needed (syntaxa):

All types of terrestrial vascular plant vegetation across Europe. Thus plots from exclusively aquatic ecosystems should be excluded.

- Other data selection criteria:

We need plant cover (or number of individuals) of each species in each plot.



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- Envisaged publications:

We plan a publication in a peer-review journal such as GCB, Ecol. Letters, GEB. Title example "Plant functional structure explains European vegetation climatic disequilibrium".

- Data deposition. Some journals require data used for the analysis to be stored in a public repository to ensure the repeatability of the analysis. According to EVA Rules, you are not allowed to store the original vegetation-plot data obtained from EVA. However, if you plan to publish in such a journal, you may deposit a reduced EVA-derived dataset that (1) would make it possible to repeat the analysis published in the paper and (2) does not contain any information not used in the analysis. For example, such a dataset can contain only a subset of species (e.g., only angiosperms or only neophytes), or replace species names with codes, or replace species cover values with presences/absences, or remove all the header data, or replace the exact plot coordinates by coarse grid-cell coordinates etc. If you plan to deposit reduced information from vegetation plots, please describe here what might be deposited. If the project developed so that you needed to deposit more information than specified here, you would need to ask specific permission from the Custodians of the EVA databases used in your analysis before the dataset is deposited.

We will not publish EVA original data. In case it is required, we will share community aggregated data at plot level (such as climatic disequilibrium or functional trait means or functional coordination indexes). In addition, we will only share coarse-grid coordinates if they are required for identification.

- Plant trait data from the TRY consortium. If you plan to combine your analysis of vegetation-plot data with plant trait data, you can also request a dataset of 18 gap-filled traits for a large number of plant taxa prepared by the TRY consortium. These traits include Leaf area, Specific leaf area, Leaf fresh mass, Leaf dry matter content, Leaf C, Leaf N, Leaf P, Leaf N per area, Leaf N:P ratio, Leaf delta15N, Seed mass, Seed length, Seed number per reproductive unit, Dispersal unit length, Plant height, Stem specific density, Stem conduit density, and Conduit element length. This dataset can be provided to you by the EVA manager together with the vegetation-plot data. If you use this dataset, you must inform about your project the TRY data contributors who might be potentially interested and invite them as potential co-authors, assuming they will make an intellectual contribution to your paper. The list of the TRY data contributors will be sent to you together with the gap-filled trait dataset.

Yes

- Specification of the co-authorship arrangements in publications based on the requested data. Note that the EVA Rules recommend that co-authorship is offered to a representative of each database providing data that are particularly important for the project (e.g., a relatively large proportion of the final dataset used in the analyses or data from unique vegetation types or under-represented geographic areas). This database representative should be an expert in the topic of the project (not necessarily the custodian or deputy custodian), and this person should contribute to the project more than just by providing the existing data, e.g. by intellectual contribution to the concept of the paper, preparation of new data, or helping with data analysis, interpretation of the results or writing parts of the paper (see the IAVS Code of Professional Ethics: https://www.iavs.org/page/governance_code-of-professional-ethics). The project leader should enable active participation by regularly informing potential co-authors about the progress of the project from its early stage. The project leader should also make final co-authorship arrangements based on the real input of the individual contributors.

In case of publication, we will follow EVA publication rules and we will be pleased to extend an invitation to collaborate to all the custodians or experts delegated by the custodians who provided relevant data (eg. 1-2% of the final dataset, under-represented vegetation) and will provide intellectual contribution to the article or those that have



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not provided particularly relevant data but could significantly contribute to the project beyond data provision. Interested data providers should indicate this via the EVA opt-in form.

- Eligibility of the applicant to receive EVA or ReSurveyEurope data. Specify to which EVA or ReSurveyEurope database the applicant has contributed; if the applicant is not the custodian or deputy custodian of an EVA or ReSurveyEurope database, give a name of a custodian or deputy custodian who supports this data request.

Milan Chytrý

- I agree with the terms of EVA Data Property and Governance Rules as approved on 26 May 2012 (<http://euroveg.org/download/eva-rules.pdf>).
- If I ask for ReSurveyEurope data, I agree with the terms of ReSurveyEurope Data Property and Governance Rules as approved on 6 April 2022 (<http://euroveg.org/download/resurveyeurope-rules.pdf>).
- In any result obtained based on EVA core data (non-repeated vegetation surveys), I will cite the EVA report article (Chytrý et al. 2016; <https://doi.org/10.1111/avsc.12191>). In any result obtained based on the ReSurveyEurope data (repeated vegetation surveys), I will cite the ReSurveyEurope report article as soon as it is published. In addition, I will cite individual source databases used in my project (if possible, in the list of References; if not possible, at least as a list of databases in the electronic supplementary material).
- If I ask for the plant trait data from TRY, I agree to invite to my project the TRY data contributors following the list received from the EVA database manager.

Barcelona, 30/06/2026

María Ángeles Pérez Navarro