



European Vegetation Archive Data Request Form

To obtain data from the European Vegetation Archive (EVA), please first enquire the EVA database administrator Ilona Knollová (ikuzel@sci.muni.cz) whether the data meeting 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.

- Applicant's name:

Wilfried Thuiller

- Applicant's institutional address:

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- Project title:

Predicting and protecting the European flora biodiversity to climate and land use change

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

This work is part of a EU HORIZON project called NaturaConnect that has received funding from the European Union's Horizon Europe Innovation Action program (HORIZON-CL6-2021-GOVERNANCE-01).

The main goal of the project is to design a resilient and coherent Trans-European Nature Network (TEN-N) with the aim to enable protection of at least 30% of the land with at least one third under strict protection.

To this end, we plan to use different modelling approaches, accounting for dispersal, to create spatial projections of current and future distribution of species, traits and habitats at the EU level under different climate change and land use scenarios to identify priority areas for protecting and restoring multifunctional corridors.

In this context, we discussed with Milan Chytrý to use the whole EVA database to model most European plant species in Europe. We will develop ensemble machine learning methods coupled with migration models to predict at high resolution plant species distributions, but also functional traits and trait diversity. Outputs might also be used in the FeedBacks project that involve Milan Chytrý and Helge Bruelheide. Both researchers are strongly supporting the use of EVA data for the NaturaConnect project.

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

Only researchers and research assistants from Thuiller's group, who participate to the NaturaConnect project (Gabrielle Deschamp, Julien Renaud, Maya Guéguen, Sara Si-Moussi)



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

From now to June 2026 (end of the NaturaConnect Project)

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

EU countries + all adjacent regions (Northern Africa, Anatolia, Cyprus, Greenland, Macaronesian Islands, West Russia) to make sure we capture the whole niche of most plant species.

- 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, a maximum precision of 5km would be appropriate.

- Vegetation types needed (syntaxa):

Our objective is to cover the whole European flora

- Other data selection criteria:

- Envisaged publications:

Journal(s) in ecology and environmental sciences. Multidisciplinary journal like Nature or Science.

- **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.

Predictions at high resolution (1km) will be made available.

- **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 for 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 from 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, we need these traits to model trait diversity and variance



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- 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: <http://iavs.org/Governance/Code-of-Professional-Ethics.aspx>). 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.

We offer co-authorship to one representative of each EVA database who registers for this project in the EVA online form and provides intellectual contribution to this study.

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

This project is supported by 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>).
- In any result obtained based on this data, I will cite the EVA report paper (Chytrý et al. 2016; <https://doi.org/10.1111/avsc.12191>). 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.

Grenoble, 29/09/2022

Wilfried Thuiller