



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:

Reinout Vandenabeele, Koenraad Van Meerbeek, Stef Lhermitte

- Applicant's institutional address:

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- Applicant's e-mail:

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- Project title:

ECOGraph – a graph-based approach to species distribution modelling

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

Core EVA data

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

Our goal is to integrate the survey data in a new approach for species distribution modelling, where co-occurrence data and graph deep learning are combined. For our study, the GeoPlant dataset (Picek et al., 2024) would be ideal, as it already contains a lot of ready-to-use & clean files, fit for deep learning-based species distribution models. Nevertheless, an additional aspect would be the integration of phylogenetic and/or trait data in the model graph layers to account for (unspecified) biotic interactions, which is not possible with GeoPlant's anonymized species data. Therefore, we are requesting the same data as in EVA project # 196 – 2023-11-22 MAMBO (by L. Picek), complemented by trait data.

Picek, L., Botella, C., Servajean, M., Leblanc, C., Palard R., Larcher T., Deneu B., Marcos D., Bonnet P. & Joly A. (2024). GeoPlant: Spatial Plant Species Prediction Dataset. *Arxiv*. <https://doi.org/10.48550/arXiv.2408.13928>

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

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

We plan to write at least one paper, with ETD the end of 2026/early 2027.

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

Europe and adjacent areas

- 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?

We would like the plots to be georeferenced (with latitude and longitude), and to have the plot size included. We are also requesting coordinate uncertainty of the plot locations, but there is no required minimum accuracy.

- Vegetation types needed (syntaxa):

All European flora

- Other data selection criteria:

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- Envisaged publications:

A paper in a peer-reviewed scientific journal, discussing the results of our approach – whether the integration of the graph deep learning with co-occurrence data improves species distribution model predictions (focussing on model performance and methodology).

- **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 do not plan to deposit source data. Depending on the journals, we might however need to deposit a (reduced) dataset, but we will refer to the GeoPlant dataset where possible, and any additional information (e.g. phylogeny/traits) will be recoded in a similar anonymization approach.

- **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



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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.

According to the EVA guidelines, we will offer co-authorship to one representative of each database of particular importance in our analysis (e.g. those that contribute to at least 2% of the data in the final dataset), but expect intellectual contribution beyond data provision, for example involvement in the data analysis or manuscript writing/revision. Additionally, representatives of databases showing interest in collaboration are invited to fill out the online form, which will be evaluated on individual request basis.

As the data will be used for deep learning species distribution models, and similarly to EVA project # 196, our main goal is to evaluate model performance in a machine learning context, without a focus on individual species.

- 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.

Koenraad Van Meerbeek custodian of BE_0001 database of ResurveyEurope, FR_B Van Mechelen_Languedoc and BE_A Van Meerbeek_Flanders of EVA

- 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).



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- 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.

Leuven, 18/11/2025

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